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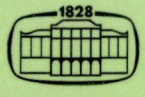

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ACTA LINGUISTICA HUNGARICA

AN INTERNATIONAL JOURNAL OF LINGUISTICS

AKADÉMIAI KIADÓ
BUDAPEST

ACTA LINGUISTICA HUNGARICA

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GUEST EDITORS' NOTE

In the pragmatics literature there is no consensus concerning the subject of the field. One can find various treatments of pragmatics that differ from each other, e.g., in respect to how pragmatics is related to grammar and semantics, or to code use, communication and cognition; whether the phenomena studied by pragmatics belong to competence or performance; whether the pragmatic abilities of the human mind may be considered a module, and if so, how this module could be characterized. (For an overview of pragmatics conceptions, traditions and methods, see Jef Verschueren, The pragmatic perspective. In: Jef Verschueren–Jan-Ola Östman–Jan Blommaert (eds.): *Handbook of pragmatics: Manual.* 1995, 1–19. Benjamins, Amsterdam.)

In the papers presented here about pragmatics and in a previous, first instalment of this thematic issue, which was published in volume 51 (3–4, 2004) of *Acta Linguistica Hungarica*, one can also see the different strands. Hence, there is only a general "common denominator" valid for all contributions: Pragmatics deals with **the use of language in various contexts to achieve various purposes**, primarily from a linguistic point of view.

The diversity of the previous and present papers and pragmatics itself is increased by the fact that phenomena of language use are the subject of several other disciplines: social psychology, sociolinguistics, rhetoric, stylistics, etc. Indeed, these fields amplify our knowledge about issues of language use. In addition, pragmatics, in accordance with its theory-dependent scope of interest, strives to advance aided by these disciplines and integrate their achievements. From among the disciplines studying language use, discourse analysis merits a separate mention. Very often, it is demarcated from pragmatics only because of its own name, which, however, can refer to a wide range of topics such as analysis of oral discourses and written texts as well as conversation analysis, discourse and text grammar.

The first aim of this special issue, i.e., the previous and present collections of papers is to show **the diversity** (in the above-mentioned senses) **characteristic of present-day Hungarian pragmatics research**. The second aim of the two instalments is to provide up-to-date investigations which

apply **the theoretical and interdisciplinary approaches to several kinds of pragmatic phenomena in Hungarian**. The editors think that each paper contributes this way to the further development of theoretical issues and/or description of pragmatics of Hungarian language use.

Turning to the brief overview of the papers included in this second instalment of the thematic issue of *Acta Linguistica Hungarica*, we have to begin with a remark concerning the arrangement of the papers. The articles are arranged alphabetically by their authors' names. The topics of the papers will also be introduced below in this order but we will attempt to indicate some interconnections between them.

The contribution *Remarks on the cognitive base of pragmatic principles* by András Kertész and Csilla Rákosi aims at the exemplification of the applicability of plausibility analysis to linguistics. Starting from the criticism of Robinson (1997), the paper argues for two assumptions. First, as opposed to a theory of distributed systems, it is a theory of plausible reasoning that can capture basic methodological problems of theory formation in pragmatics (such as circularity, category error, the arbitrariness of interpretations of data and the objectification of the theorist's cultural and linguistic knowledge as principles of language behaviour). Second, the cognitive base of pragmatic principles is inferential and plausibilistic, rather than non-inferential and probabilistic. The line of argumentation put forward in Kertész and Rákosi's contribution seems to pave **the way for systematic investigations into the argumentational structure of linguistic theories**.

In her paper entitled *The concept of preference and its manifestation in Hungarian verbal conflict sequences*, Ágnes Lerch attempts to clarify the nature of preference considering that the use of this classical concept of conversation analysis seems to have become confused and vague in the course of time. After reviewing the role of preference in conversation analysis, she suggests a complex interpretation of preference which unifies the different (structural, social psychological and statistical) views from the perspective of pragmatic principles. Furthermore, using conversations from radio and television series of debate programs as data, she argues that a deeper and uncontroversial interpretation of the notion of preference is possible if, in addition to a structural inference rule and interpersonality principles, one takes into consideration the role of rationality principles as well. So, approaching preference from the perspective of pragmatic principles may prove instrumental in **integrating conversational analysis** more closely **with new directions and results of pragmatic research**.

The paper *Apology routine formulae in Hungarian* by Małgorzata Suszczyńska is a contribution to **sociopragmatic research** on one of the

Central European languages. The goal of this paper is to demonstrate that Hungarian apology routine formulae, while bearing similarity to such direct apology expressions in other languages, have **language-specific forms and functions**. Hungarian apology routine formulae used by Hungarian adults in a written Discourse Completion Test are classified into five types. Their choices are influenced by such factors as the offence type and its severity, the social role of the interlocutor and the offender's gender. Two main apology types, *Ne haragudj* 'Don't be angry' and *Elnézést* 'Excuse me' are shown to perform complementary communicative functions of restoring harmony in familiar vs. unfamiliar settings. Gender differences in the use of routine formula types demonstrate that males and females choose different ways to restore social harmony and may attach importance to different aspects of the context.

This second instalment of the thematic issue of *Acta Linguistica Hungarica* also contains two book reviews (by Károly Bibok and by Julia Coryell and Saihua Xia, respectively) related to the special topic.

* * *

The guest editors would like to express their gratitude, first of all, for the opportunity given to them by the editor-in-chief of *Acta Linguistica Hungarica*, and for the assistance of the associate editor. All the papers were refereed by at least two reviewers, to whom we wish to express our special thanks at this place. Finally, we are grateful to the contributors for their commitment and patience during the refereeing and editing process.

Enikő Németh T., Károly Bibok

Acta Linguistica Hungarica, Vol. 52 (1), pp. 5–40 (2005)

REMARKS ON THE COGNITIVE BASE OF PRAGMATIC PRINCIPLES*

ANDRÁS KERTÉSZ – CSILLA RÁKOSI

The present paper aims at the exemplification of the applicability of plausibility analysis to linguistics. Starting from the criticism of Robinson (1997), the paper argues for two assumptions. Firstly, as opposed to a theory of distributed systems, it is a theory of plausible reasoning that is capable of capturing basic methodological problems of theory formation in pragmatics (such as circularity, category error, the arbitrariness of interpretations of data and the objectification of the theorist's cultural and linguistic knowledge as principles of language behaviour). Secondly, the cognitive base of pragmatic principles is inferential and plausibilistic, rather than non-inferential and probabilistic.

1. Introduction

1.1. On objective theories of language and cognition

In a provocative paper Edward A. Robinson (1997) claims that pragmatic theories motivated by Grice (1975) or Sperber and Wilson's relevance theory (1986/1995) are paradigm examples of what he calls "objective theories of language and cognition". This kind of objectivism has, in Robinson's view, at least two central features (see Robinson 1997, 256):

(a) Researchers presuppose the distinction between subject and object which is characteristic of the relationship between a scientist and the things he or she observes. This means that scientists assume to observe impartially external objects. As a result, it is taken for granted that the rules and structures described are impartial facts which are true or false.

(b) Objective theories of language and cognition tend to turn the structures which have been created in this way into structures of the

* Work on the present paper was supported by the Research Group for Theoretical Linguistics of the Hungarian Academy of Sciences at the University of Debrecen. We are grateful to Károly Bibok, János László, Enikő Németh T. and two anonymous reviewers for helpful comments. Our special thanks are due to George Seel for improving our English. None of these people are responsible for the shortcomings of our paper.

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mind. They assume the existence of a kind of cognitive content which causes people to act and which can be described independently of the background knowledge of the scientists who observe linguistic behaviour.

Objective theories in this sense raise a series of fundamental difficulties that can be summarized as follows (see Robinson 1997, 256–8).

The first is that objective theories yield **a category error** according to which the mechanisms underlying the linguistic behaviour described are identified with the models of language one obtains as a result of trying to objectively describe the things observed. That is, the theoretical model is assumed to be identical with the cognitive content underlying linguistic behaviour which this model is intended to describe. In this way objective theories are assumed to translate immediately into mental structures.

Secondly, from (a) and (b) above it follows that objective theories of cognition are in fact nothing but the **interpretations** of the scientist.

Thirdly, a certain kind of **circularity** presents itself. On the one hand, the theorist maintains that there exist certain principles which govern communicative behaviour. On the other hand, theorists use their cultural and linguistic knowledge in order to define basic terms with the help of which communicative behaviour is described. Accordingly, what the theorist describes is in fact the reflection of his/her own communicative and cultural knowledge.[1] By way of illustration, let us mention the example of the Gricean maxims. At first sight it seems to be the case that these maxims objectively describe certain mechanisms which seem to underlie everyday communication and which may also account for certain kinds of meanings that are brought about by certain utterances. Nevertheless, these maxims can be formulated only because the researcher himself/herself has an understanding of what in a given society counts as brief, relevant, orderly, informative. Thus, what happens is that the researcher's own cultural knowledge is objectified: those pieces of information which are properties of the theory are assumed to constitute objective accounts of what actually happens in communicative processes. Such knowledge is considered to be **the cognitive base of pragmatic principles**, while in fact it is nothing but cultural knowledge that all members of a given society, including the researcher himself/herself, share. The researcher does **not** detect regularities objectively given, but rather, he/she projects his/her own knowledge onto the object of his/her

[1] Independently of Robinson's argumentation, Kertész (2004a) discusses a similar kind of circularity with respect to cognitive semantic theories such as Lakoff and Johnson's embodied realism and Bierwisch and Lang's two-level model.

investigations while claiming the latter to be objectively detected.[2] This inevitably leads to a difficulty which concerns the infinity of the relations included in the base:

> "Of course, it can be argued that this simply means we need to **objectively define all of the relationships within the cultural knowledge base** and to allow the principles to act on these defined relationships. [...] In an objective theory, all of the conceptual base that can make a difference in interpretation must be explicitly defined. But, if we consider this, we find that the number of relations that need to be explicated is **theoretically infinite**. For instance, consider (3):
>
> (3) A: How are we getting to the movie?
> B: Well, I have the car.
>
> For B's response to mean 'I'll drive', B must have a licence, the car must have fuel, it must seat more than one passenger, the battery must have acid, all the essential working parts must be present and correctly assembled, the laws of physics must be in effect, etc., **ad infinitum**. Any of these facts of cultural knowledge can be challenged to cancel the implicature in B's response that they can use the car. [...] Because all of these assumptions can figure in the final implicature, **an objective system must specify all of these assumptions in all of the different situations** in order to determine which are in effect for a given utterance. Once we have taken for granted the epistemological assumption inherent in objective approaches to language and cognition, **we must fully formalize the knowledge base**. Of course, to define all these possible inferences, there must be a fully spelled-out knowledge base.
>
> The complexity of this knowledge base has been a central concern for many theorists in the behavioural and cognitive sciences. [...] Ultimately, the task proved to be impossible---objectively defining **the full cultural base** of understanding is an infinite process of **specifying and respecifying** finer and finer grains of detail. [...] **It is beyond the ability of a formal system to capture cultural knowledge**, i.e., the knowledge used in discourse understanding." (Robinson 1997, 258–9; emphasis added)

The difficulties thus summarized boil down to two distinct but interrelated problems. The first is a **metascientific** problem concerning the methodology which pragmatic theories make use of, whereas the second is an **object-scientific one** which focuses on a specific aspect of the object of pragmatic theories, namely, the cognitive base of pragmatic principles:

[2] Cf. the following quotation: "As a cognitive mechanism, these principles are defined as **decision metrics**. What a brief or orderly usage is, is what the principle is supposed to tell us. But, **to make a decision, these principles must have a definition of the value they are determining**. Unfortunately, this definition is a reflection of the structure of the theorist's knowledge." (Robinson 1997, 258; emphasis added)

(P1) **The methodological problem of pragmatic theories**: How can a pragmatic theory avoid

(a) the category error previously referred to,

(b) the potential arbitrariness of interpretations,

(c) circularity, and

(d) that the theorist's cultural and linguistic knowledge be objectified as principles of language behaviour?

(P2) **The problem of the cognitive base of pragmatic theories**: How can the cognitive base underlying pragmatic principles be accounted for, if we know that it

(a) contains an infinite amount of assumptions,

(b) consists of assumptions which are context-dependent, and

(c) cannot be captured by objective theories because the latter should account for an infinite process of specifying and respecifying the information it consists of?

1.2. Solutions to (P1) and (P2)

Robinson's solution to (P1) is this:

(S1) A theory of distributed systems avoids (P1)(a)–(d).

In accordance with (S1), he also puts forward a possible solution to (P2):

> "The **regularities** which the theories above describe **emerge from the action of a distributed system** as it exists in the world. They are **not represented** in the cognitive system but **reflect** its general existential nature. They represent an external observer's view of the overall activity of a number of independent but mutually sensitive interacting cognitive and situational factors, **none of which independently represents any specific pragmatic principle**. [...] Rather than viewing concepts as discrete representations, we should view them as **relative** and **subjective entities**. In such a view, internal representations are **dynamic**, **generalized associations** which always **act relative to the environment**. [...] I will relate objective linguistic theories to a more realistic view of cognition which **does not depend on individual mental representations and calculations**. [...] This approach, while it remains **objective** as an external description of behaviour, has the advantage of not utilizing locally definable representations. Instead, it treats the speaker as an **integral part of the environment** by modelling the environment and the associational patterns and mechanisms that tie the individual to the environment. We must not treat mental representations as descriptions but as **probabilistic traces** tied to the environment. Understanding is **not the calculation and representation**

> **of a knowledge structure** in the mind. It is rather the **state of the cognitive system** at a certain point in time in relation to the world around it." (Robinson 1997, 259f; emphasis added)

The main aspects of this proposal can be summarized as in (S2):

(S2) The sub-problems of (P2) can be solved by assuming that the cognitive base of pragmatic principles includes relations which are

(a) non-inferential, and

(b) probabilistic.

1.3. Remarks on (S1) and (S2)

There are a couple of important issues which seem to question the workability of Robinson's model. Let us in what follows point out some of them.

The model proposed by Robinson cannot avoid the problems listed in (P1) as he himself observes.[3] Nevertheless he maintains that "whereas the pragmatic theories [...] point towards regularities at their level of description, this model can be used to point to regularities at another, perhaps neural or ecological, level of description" (Robinson 1997, 264).

Thus, Robinson simply pushes the problem to another level of theoretical description, i.e., to another subsystem of "a distributed system" (e.g., perceptual system, associative memory). However, we cannot carry on the generation of new levels endlessly; in order to prevent ourselves from getting into an infinite regress we have to stop somewhere. But at the last level we are forced to turn the structures of the theoretical description into structures of the mind.

Moreover, if we ask the question of how he knows which conceptual content is associated with a certain utterance, we cannot avoid answering: on the basis of his cultural and linguistic knowledge. So, the same kind of circularity seems to appear in this model as that which it was intended to resolve. This can be illustrated by the following quotation:[4]

[3] "Of course, we can formulate objections against this model similar to those made earlier against the linguistic descriptive models." (Robinson 1997, 264)

[4] The quotation refers to the following example:

"(2) A: Did you go to Bloomingdale's when you went to New York?
B: Well, what do you think of my new dress?" (Robinson 1997, 257)

> "For example, in (2) the conversants are discussing whether B had gone to Bloomingdale's. Thus, **knowledge associated with Bloomingdale's** is **active** for both conversants. Part of this knowledge is the fact that Bloomingdale's sells dresses. This is simply part of the **cultural knowledge** that A and B possess about Bloomingdale's. These two individuals, having been raised in their particular culture, have learned what Bloomingdale's is, and part of this knowledge is that it sells dresses. While **this association may not be the most active thing** for A at the time of his or her utterance, **this relationship is further activated by B's response**. Furthermore, A's goal is to get an answer to the first question, and A and B are following standard conversational patterns. So **the implicature is automatically available** to A because of the correspondence between A's goals and salient aspects of the conceptual material associated with dresses and Bloomingdale's. Within this approach, **it is not calculated**; it arises from the correspondence of all of these parts as they are activated within this context." (*op.cit.*, 267f; emphasis added)

Now we may ask what the source of the knowledge of the associations is that are most probable in this situation: surely, it is Robinson's own cultural knowledge. He does not mention any experiments in which the perceptual system and the memory of the people in this dialogue have been investigated with the methods of neuropsychology. Therefore, (S1) is not capable of capturing this kind of problem (see also section **1.1**).

At least one of the sources of the difficulties might be that the gap between the level of the associative memory and that of linguistic behaviour is too great. For instance, the principle that "[...] if we look at how the cognitive system [...] works, we see that relevance is actually created by this system, because it is organized to associate things related in previous experience" (*ibid.*, 267), significantly underdetermines linguistic meaning.

In direct connection with this finding, (S2)(a) appears to be problematic as well. Suppose that there is a third person C who has never heard the name *Bloomingdale's*. Despite this fact, he or she may find out the implicated content of B's answer—without having any knowledge associated with the name of the department store mentioned. In this case, we cannot claim that the implicature is automatically available to him or her. On the contrary: C can only 'calculate' the intended meaning of B's utterance by drawing inferences from the content of the question, the answer and some additional background knowledge about buying dresses. A similar case can be constructed through the modification of the dialogue:

(1) A: Your dress is really nice.
B: I was at Bloomingdale's when I went to New York.

Here A need not have any knowledge of Bloomingdale's to be able to understand the whole content of B's response. He or she can only **infer** it from pieces of information rooted in his or her cultural knowledge. Consequently, (S2)(a) may be questioned.

A third example is worth mentioning:

(2) A: Mrs. X is an old bag.
B: The weather has been quite delightful this summer, hasn't it?[5]

If we consider the principle formulated by Robinson that "[...] only what is specifically uttered is what is fully activated" (*ibid.*, 265f), then we cannot find out what B intended to communicate. Certainly, A's statement is part of the context, so we have to take it into consideration as well. But B's utterance has seemingly nothing to do with A's words: it seems to be totally irrelevant in comparison to the content of A's statement. Realizing this, we remember previous experiences of similar situations and conclude that B wanted to say that A had been impolite and he or she refused to talk in this way. But this means that A can be in possession of the entire situation only after discovering that B's contribution has been irrelevant. Consequently, the link between associations and implicatures seems to be not as directly probabilistic as supposed by Robinson—therefore, (S2)(b) is problematic, too. Rather, it seems to be the case that we are dealing with a 'cyclic' and 'prismatic' revaluation of the pieces of information available.

The point, then, is that the claim that "the activation of the goal and of the perceived circumstances at the same time results in a correspondence between all of the parts which arises as an automatic, reflexive mental process [...]" (Robinson 1997, 268) might be replaced by the following assumption: The activation of the goal and of the perceived circumstances at the same time results in a correspondence between all of the parts which arises as a **cyclic and prismatic inference and decision process**.

In sum, the above considerations indicate that both (S1) and (S2) may be problematic and these problems justify the search for alternative suggestions.

[5] See Grice (1975, 54).

1.4. Alternatives to (S1) and (S2)

At this point of our argumentation we hypothetically put forward the following alternatives to (S1) and (S2):

(S1′) A theory of plausible reasoning avoids (P1)(a) (d).

(S2′) (P2) can be solved by assuming that the cognitive base of pragmatic principles includes relations which are

(a) inferential in a specific sense, and

(b) cyclic and prismatic.

As the above summary witnesses, at first sight Robinson's views seem to be quite odd, and therefore, one may ask the question if the problems (P1) and (P2) are 'real' problems, or rather, just arbitrarily constructed quandaries. Nevertheless, we will try to show that this is not so and that it is precisely the unusual nature of Robinson's line of argumentation that makes it an instructive starting point for illustrating the workability of our approach to the methodology of pragmatics both on an object- and metascientific level. We hope that in arguing for an alternative solution to (P1) and (P2) we will be able to sketch the basic tenets of a theory of plausible reasoning which will prove to be a fruitful tool for solving central problems of theory formation in pragmatics in particular and linguistics in general.

In the rest of this paper we will proceed as follows. In section **2** we will briefly outline some tenets of a theory of plausible reasoning on a high level of abstraction (section **2.1**); nevertheless, we will also show that it is not unreasonable to assume the cognitive reality of plausible inferences (section **2.2**). In section **3** we will try to show that (S2′) is a possible alternative to (S2) which is capable of capturing (P2) by accounting for some of the shortcomings of (S2). In section **4** we will briefly touch on (P1) indicating that the theory of plausible reasoning we have introduced can maintain (S1′). Finally, section **5** will summarize the main findings and raise open questions that seem to be worth considering in the future.

2. On plausible inferences

2.1. Basic assumptions

In this section we will summarize certain aspects of a possible theory of plausible reasoning. The scope of the present paper does not allow us to provide a precise explication of the basic notions, therefore we will consciously use them preexplicatively. Nevertheless, we make the following terminological remarks, which are not intended to be precise explications but which serve to render our line of argumentation followable and understandable.

First, the notions of 'deductive', 'conclusive', 'demonstrative' and 'logical' inference are used as synonyms, and so are the notions of 'plausible', 'non-demonstrative' and 'non-conclusive' inference.[6] Second, we regard the basic concepts and the notational conventions of propositional logic as given, and they are not introduced systematically. Third, the notions of 'consistency' and 'non-contradiction' and those of 'inconsistency' and 'contradiction' are also treated as synonyms, respectively. Fourth, by 'heuristics' we understand rules (i) the role of which is to survey (in a non-systematic manner) relatively large domains of problems, (ii) which may lead to the solution of a certain problem, but (iii) which do not necessarily lead to the solution or to the optimal solution of this problem. Fifth, by 'data' we understand such assertions that embody the knowledge available to us for the solution of a problem in a given informational state (according to this formulation, we call not only those assertions 'data' which describe 'facts' or 'observations' in whatever sense of these terms, but also every such background assumption which we use during the argumentation).[7]

[6] Nevertheless, see Kertész – Rákosi (2005b) for a more sophisticated treatment of these notions according to which non-demonstrative/non-conclusive inferences include both plausible and fallacious inferences.

[7] On this interpretation of 'data' cf. Rescher and Brandom's characterization: "'Data': theses that can serve as acceptance-candidates in the context of inquiry, contentions which, at best, are merely presumptively true [...]. These are not certified truths (or even probable truths) but theses that are in a position to make some claims upon us for acceptance: They are prima facie truths in the sense that we would incline to grant them acceptance-as-true if (and this is a very big IF) there were no countervailing considerations upon the scene." (Rescher – Brandom 1979, 69)

Presupposing these terminological remarks, in what follows we characterize plausible inferences by taking the classical work of George Polya and Nicholas Rescher as our starting point.[8] We will integrate findings which have already been put forward in the literature and as a result of this integration of classical approaches we will sketch a coherent and many-sided account of plausible reasoning.[9]

(i) The notion of plausible inference. The common features of plausible inferences can be summed up in two points as a first approximation:

> "First, they **do not have** the **certainty** of a strict demonstration. Second, they are useful in acquiring essentially **new knowledge**, and even **indispensable** to any not purely mathematical or logical knowledge, to any knowledge concerned with the physical world. We could call the reasoning that underlies this kind of evidence **'heuristic reasoning'** or **'inductive reasoning'** or (if we wish to avoid stretching the meaning of existing terms) 'plausible reasoning'." (Polya 1948, 221f; emphasis added)

The fundamental difference between plausible and deductive inferences can be demonstrated through the following example:

Deductive inference:	**Plausible inference:**
If A, then B	It is certain that if A then B
not B	A is possible, B is not certain
not A	After verifying B, A is more plausible
modus tollens	**reduction**

[8] It is important to emphasize that Polya's and Rescher's views are fully compatible: "Polya's entire analysis of the logic of inductive reasoning can also be accommodated on the present approach" (Rescher 1976, 67). Moreover, there are at least two substantial reasons for concentrating on these classical approaches. Firstly, due to the pioneering nature of these works, there is no avoiding their use in presenting the essentials of plausible reasoning (see Woods et al. 2000, 258). Secondly, Polya's and Rescher's ideas are not outmoded at all, because they have been rediscovered and integrated into current trends which revaluate traditional problems of the philosophy of science such as the distinction between the context of justification and the context of discovery, inconsistency, the process of scientific problem solving, etc.; in this way these ideas have been integrated into current approaches to argumentation theory and AI research. Therefore, it is unavoidable to take those classical works by Polya and Rescher as our starting point which most current accounts of plausible reasoning are rooted in. Should our approach turn out to be tenable, later refinements in the light of recent advances will be both possible and necessary.

[9] For a considerably more comprehensive discussion of our approach see Kertész (2004b); Kertész – Rákosi (2005a) and Rákosi (2005).

(ii) The uncertainty of plausible inferences. The definitive difference between the two conclusions in the example above is that while with deductive inferences the truth of the conclusion follows from the truth of the premises with certainty, in the case of plausible inferences the premises merely increase the **credibility** of the conclusion (cf. Polya 1954, 113). Consequently, plausible inferences are less reliable by nature than conclusive inferences: they necessarily involve the possibility of mistakes, errors and rejectability (see also Walton 2001, 159).

(iii) The heuristic function of plausible inferences. We very often find ourselves in a situation during the solving of a problem that, at a certain point, we have **several** hypotheses (conjectures) at our disposal which mutually exclude each other, but every one of which is supported by certain considerations and therefore each may represent a possible alternative in view of the amount of information which we possess. Then we have to decide between competing hypotheses but we cannot turn to deductive logic for help. Thus, plausible inferences are heuristic tools with the purpose of bringing us closer to the solution of a certain problem, inasmuch as they help us form an opinion of which possible alternative is the most promising on the basis of the information available to us at any given moment (Polya 1948, 102; cf. also the quotation in (i); Walton 2001, 164).

(iv) The partial basis of plausible inferences. With deductive inferences, the premises make up a 'full basis' in the sense that "[i]f we receive some new information that does not change our belief in the premises, it cannot change our belief in the conclusion" (Polya 1948, 223). On the other hand, in the case of plausible inferences the premises make up only a 'partial basis', that is the complete basis has a part which is not expressed through the premises:

> "[...] the premises constitute only one part of the basis on which the conclusion rests, the fully expressed, the 'visible' part of the basis; there is an unexpressed, invisible part, formed by something else, by inarticulate feelings perhaps, or by unstated reasons. In fact, it can happen that we receive some new information that leaves our belief in both premises completely intact, but influences the trust we put in A in a way just opposite to that expressed in the conclusion. To find A more plausible on the ground of the premises of our heuristic syllogism is only reasonable. Yet tomorrow I may find grounds, not interfering at all with these premises, that make A appear less plausible, or even **definitively refute it**. The conclusion may be shaken and even overturned completely by commotions **in the invisible parts of its foundation**, although the premises, **the visible part, stand quite firm**." (Polya 1948, 223f; emphasis added)

(v) The context-dependence of plausible inferences. In plausible inferences the conclusion cannot be detached from the premises. Moreover, Polya emphasizes that the 'weight' of the conclusion depends not only on the premises explicitly formulated, but also on hidden grounds which form the 'invisible' part of the partial basis such as the individual's background or cultural knowledge, etc. (Polya 1954, 115f). The conclusion of a plausible inference is always only provisional; its acceptability is closely dependent on the particular circumstances given. Rescher maintains, too, that it is definitely not universalizable formal considerations that determine the evaluation of the plausibility of conclusions, but rather, it is clearly situation-specific, contextual factors in the widest sense (Rescher 1976, 111ff).

(vi) The plausibility of the premises and the emergence of contradictions. It is one of the basic issues of plausibility theory that it can treat both the emergence and the resolution of contradictions.

Firstly, those premises which we are compelled to treat as the starting point of our reasoning are not to be regarded as certainly true, but can only be assumed to be plausible in the given context, that is, they are more credible than their potential alternatives if certain conditions are satisfied. This, in accordance with the nature of the partial basis mentioned in (iv), may result in the inconsistency of the basis which we have to use as our background for reasoning. In this sense, the basis is informationally overdetermined. We have to reason by making use of not completely trustworthy information—that is, building on a partial basis. We know that only plausible inferences can be drawn from a partial basis, and these inferences can lead to contradictory conclusions in certain cases: to explain one's data, one may set up hypotheses which mutually exclude each other but which are plausible in certain respects in a given context (Rescher–Brandom 1979, 160). That is, the emergence of contradictions may have its **sources** in plausible inferences.[10]

Secondly, resolving this kind of informational overdeterminacy is only possible if we decide what to abandon amidst bits of information which contradict each other. To achieve this, we need to exceed purely formal considerations, as was argued for in point (v), and somehow have to compare the possible alternative decisions. If we consider conclusions to be tools in information processing (for more on this, cf. Rescher 1976, 97ff),

[10] Of course, a partial basis does not necessarily lead to the emergence of contradictions, but the emergence of contradictions is one possibility that may arise from the peculiarities of the partial basis.

plausible inferences can be perceived as converting a set of premises into information of a certain plausibility, that is into a conclusion (cf. also point (vi)). This provides an opportunity for us to compare the conclusions that can be drawn from particular subsets of an informational set and choose the one which appears to be the most probable, the most optimal, and the most credible for us. One may use plausible inferences once again to resolve the (possible) contradictions that emerge as the conclusions of plausible inferences drawn from the partial basis, examining which is the most credible of the alternatives in a given context—hoping that sooner or later an informational state is reached wherein novel contradictions do not arise. That is: one of the possible **means** of resolving contradictions is plausible inference.

To sum up: the simplest way to characterize the strong correlation between plausible inferences and the emergence of contradictions is to regard plausible inferences as one of the possible **sources** of the **emergence** of contradictions on the one hand, and as one of the possible **means** to **resolve** contradictions on the other.

(vii) The cyclic and prismatic nature of plausible reasoning. We reason cyclically by starting off from an inconsistent set of premises. We return to the problems in question again and again, and supplementing the partial basis with different latent background assumptions we transform the set of information at our disposal by drawing additional plausible inferences, and re-evaluate the credibility of the respective data (hypotheses, alternative explanations). During these cyclic returns we aim to filter out hypotheses unacceptable for some reason gradually, according to different — possibly contradictory — considerations (Rescher 1987, 304; 1976, 111ff, 118).[11] This way it becomes possible to compare one's cycles and to assess one's progress. First and foremost, there are two questions one may consider during this process:

(a) The first question is whether one has managed to root out the contradictions within a particular cycle (that is whether one has gained a consistent set of information), or whether at least the plausibility of any of the contradictory hypotheses has increased.

[11] See Kertész Rákosi (2005a;b) considerably more detailed characterizations of the cyclic nature of argumentation in linguistics supported by a series of case studies.

(b) The second question concerns the degree of plausibility of the complete amount of information within a reasoning cycle as compared to the total of other reasoning cycles.[12]

Moreover, the cyclic reasoning is at the same time prismatic as well. The relation between the cyclic and the prismatic nature of reasoning is formulated by Rescher clearly:

> "[...] it may make perfectly good sense to **proceed dialectically** and consider an issue **prismatically**, by proceeding in the variable light of not merely different but even inconsistent perspectives."
> (Rescher 1987, 306f; emphasis added)

> "[...] 'dialectical' reasoning is a matter of the repeated reconsideration of old issues from newly attained points of view. The root idea of such reasoning is that of a multistage process where we repeatedly re-examine one selfsame issue from different and mutually inconsistent points of view. It is a matter of developing a course of reasoning in several phases or 'moments' where we consider an issue now from different and mutually incompatible points of departure, moving in a round-about way from P via non-P to a conclusion of some sort. **We proceed in circles or cycles where we return to a certain issue now in this light and now in that.** We do not constantly press onwards to new ground, repeatedly crisscrossing the same terrain, approaching the old issues from different and often discordant angles. [...] In dialectical reasoning **we make assertions that are negated ('corrected' so to speak) by subsequent counter-assertions**. We have here a process of successive approximation as it were, where **at each stage we assert things that are literally false and in need of eventual correction**. When things go smoothly, however, these successive corrections appertain to increasingly minor and insignificant respects. [...] **At each stage what we say is not literally correct but only correct up to a point.**" (*op.cit.*, 303f; emphasis added)

(viii) The universality of plausible inferences. Although Polya discusses the mechanisms of plausible inference mainly in the domains of

[12] This cyclic nature of reasoning has to be clearly distinguished from circularity: "This circular process highlights the element of 'self-correction' present in systematic applications of plausibility analysis, allowing for a revised appraisal of the initial data that provide the very materials of the analysis. There is a cyclic movement, a closing of the cycle which requires a suitable meshing – a matching process that eventually **retrovalidates** (i.e., retrospectively revalidates) the criteria of plausibility assessment with reference to the results to which they lead. [...] The sort of 'self-criticism' at issue does not reflect any **vicious** or **vitiating circularity**, but in effect amounts simply to a **feedback** process that uses later, more refined stages of the analysis to effect revisionary sophistications in the materials from which earlier stages proceeded. One indeed returns to 'the same point' but does so **at a different cognitive level.**" (Rescher 1976, 119; emphasis as in the original and added)

mathematics and the sciences, he also emphasizes that these mechanisms are universal and not specific to these domains:

> "The underlying principle is generally recognized in the natural sciences, and it is implicitly admitted in the law courts, and in everyday life. The verification of a consequence is regarded as reasonable evidence for a conjecture in any domain. Thus our patterns appear as **universal**.
>
> We pay, however, a price for such 'universality'. Our pattern succeeds in being universal because it is one-sided, restricted to one aspect of plausible inference. The universality becomes blurred when we raise the question 'What is the weight of such evidence?' In order to judge the weight of the evidence, you have to be familiar with the domain; in order to judge the weight with assurance, you have to be an expert in the domain. Yet you cannot be familiar with all domains, and you can still less be an expert in all domains. And so everyone of us will notice soon enough that **there are practical limits to the universality of plausible inference.**" (Polya 1954, 114; emphasis added)

One important consequence of this stance is that scientific and everyday reasoning may rest on the same patterns of inference,[13] although, of course, from domain to domain these patterns may be manifested in very different ways. Thus, at the outset nothing speaks against our assumption that even the cognitive base of pragmatic principles may be governed by plausible inferences rather than probabilistic associations in the sense of Robinson. Before, however, elaborating on this, let us turn to an issue which is of utmost importance. In particular, (S2′) cannot be maintained if the patterns of plausible inference are considered to be merely abstract constructs which are intended to model how people argue. Therefore, in the next section we will show that the cognitive reality of plausible inferences may be justifiedly hypothesized, although we know very little about these cognitive processes and such a hypothesis is far from having been proved convincingly.

2.2. On the cognitive reality of plausible reasoning

We do not claim that the mind is a plausibilistic system. However, we assume two things. Firstly, that the cognitive mechanisms we try to capture 'look like' plausible inferences. Secondly, that the relations which we

[13] Our hypotheses (S1′) and (S2′) are closely related, because we assume that both scientific reasoning and everyday communicative behaviour make extensive use of plausible inferences. See sections **4** and **5**.

interpret as plausible inferences may have some kind of cognitive reality, although we do not know exactly what neural processes are at work.[14] Let us, without striving for a comprehensive discussion of the literature, mention two instructive examples illustrating the psychological aspects of reasoning in general.

Dolinina (2001) examined the use of 'theoretical' ('logical', 'formal', 'deductive') and 'empirical' ('pre-logical', 'traditional', 'inductive') inferences on the basis of neuropsychological evidence. She proposed the following solution to what is called the problem of the heterogeneity of thinking:

> "[...] neurological experiments demonstrated that both mechanisms of reasoning are simultaneously present in the brain of one and the same person, that both of them can be used, but that each of them is controlled by a different hemisphere. [...] these results give a certain counterevidence to Johnson-Laird's claim that formal reasoning is not represented in the mind. [...] In the case of reasoning patterns, the right hemisphere appears to control the quality of information (e.g., the truthfulness of premises, testing them against the realities of the world and/or personal knowledge/experience), whereas the left hemisphere is responsible for the correctness of purely operational mechanisms (formal correctness of inferences). [...] Since literate western-schooled individuals possess both modes of reasoning, the question was raised [...], which of the modes is normally used [...]. Some cognitive psychologists (e.g., Johnson-Laird and Moore) claim that the traditional, semantic way of reasoning is responsible for reasoning processes and is represented in the mind, the formal being only a 'performance' strategy. Others (Wilson and Sperber) stress the priority of formal reasoning. Deglin's neurological experiments on functional differentiation of right and left hemispheres demonstrated that both strategies are present in the brain [...], so an individual can choose whatever strategy is most appropriate to the circumstances." (Dolinina 2001, 130ff)

The neurological experiments carried out by Dolinina support the assumption that there exist inferential patterns represented in the mind. However, the evidence she refers to is not sufficient for giving a sophisticated and convincing answer to the question of what kind of structure

[14] This cautious claim of ours is analogous to Robinson's evaluation of his own approach: "The point [...] **is not to say that the mind is a probabilistic system**. What it actually is, at yet another level of abstraction, is **a bunch of interconnected neurons** reacting to the world. But the overall behaviour created by a neural system situated in an environment **looks like** what we describe as probabilistic behaviour. This behaviour, described best with a cognitive model such as the one outlined above, can result in the kinds of behaviour described by linguistic models of pragmatics at their level of description." (Robinson 1997, 264; emphasis added)

these patterns of inference have and of what the application of particular patterns normally depends on.

She hypothesizes that if one is able to judge the truth value of the premises, then one prefers the 'empirical' mode, i.e., the use of the right hemisphere of the brain, whereas with respect to domains one is not familiar with, the 'logical' mode, i.e., the use of the left hemisphere is preferred. That is, she assumes a model which isolates the use of inferential patterns from the content of the premises.

However, in many cases where the 'empirical' mode was used, the reasons given for the responses contained inferences as well, even if the left hemisphere was suppressed or the experimentee had no formal education. Then the task of the right hemisphere might be not to provide the structure of inferences in general and the latter cannot be identical with the rules of formal logic. Thus, the difference between the two 'reasoning strategies' seems to lie not in the use of reasoning patterns but rather, in the consideration of the content of the premises. Accordingly, the 'theoretical reasoning mode' can be characterized as the ability to think hypothetically on the basis of formal rules of deductive logic.

The answers described by Dolinina as examples of the 'empirical' reasoning mode can be accounted for with the help of the theory of plausible reasoning. Since, according to Polya (1954, 42ff), patterns of plausible reasoning can be seen as tending to the corresponding pattern of demonstrative inference when the credibility of the premises tends to certainty, the mechanisms of plausible reasoning might explain the use of seemingly deductive inferences by uneducated persons or by experimentees whose left hemisphere was suppressed, too.

As a second example, we refer to research carried out by Politzer and Bourmaud (2002) who describe experiments which tried to give an answer to the question of what conclusions can be drawn if in inferences of the type 'modus ponens' or 'modus tollens' the truth of the 'if ... then' premise is uncertain or if there is at least another premise which undermines the truth of the major premise. They observed that the experimentees judged the uncertainty of inferences much higher with respect to medical topics than, for example, topics concerning mechanics. That is, Politzer and Bourmaud, too, consider the application of inferences to be domain-dependent, but they characterize the sources of this domain-dependence in a more sophisticated way than Dolinina does:

> "The key factor seems to be the awareness that the level of understanding of the **causal link** between antecedent and consequent of the conditional **differs**

> **from one domain to another**: for the participants, the link may be more or less strong, allowing for more exceptions to the hypothesis if it is weaker." (Politzer – Bourmaud 2002, 347; emphasis added)

> "[...] there is one single common mechanism, namely the recognition of one or several factors that are **necessary conditions** for the consequent to occur and, by this very fact, are conditions that implicitly complement the antecedent of the conditional to make it an **actual sufficient condition**. The degree of belief in the satisfaction of those factors acts as a mediator to define the degree of sufficiency of the conditional premise, that is, its credibility, and consequently, by inheritance, the degree of belief in the conclusion of the argument. **The truth status of the conclusion is treated by degree rather than in all-or-nothing manner, and this degree is closely correlated to the degree of belief in the premise**." (Politzer – Bourmaud 2002, 353; emphasis added)

As opposed to Dolinina's hypothesis, Politzer and Bourmaud's findings speak for the cooperation of the formal aspect and the content. These findings are in full accordance with Polya's claim that the strength of the conclusion is directly proportional to the strength of the premises and that normally inferences rest on a partial basis (see **2.1** (iv), (v), and Polya 1954, 41ff).

These two examples witness that, on the one hand, it is reasonable to assume that plausible inferences are not merely abstract theoretical constructs and that they have some kind of cognitive reality; nevertheless, on the other hand, research in this field is still immature and we know very little about the details of this cognitive reality.

In the next two sections we will illustrate how our model can capture some of the issues raised in section **1**.

3. On (S2′)

3.1. On the correlation between plausible inferences and the cognitive basis of pragmatic principles

So as to show the capability of our approach to plausible reasoning to capture the problem (P2), first we have to demonstrate that the main tenets of this approach **correlate** with those aspects of the cognitive base of pragmatic principles which Robinson points out.

As Robinson (1997, 262) maintains, one of the difficulties which one encounters in trying to analyse an example like

(3) I am looking for a doctor.

is that although it is assumed that the speaker means a medical doctor, there is an infinite amount of background information that may specify the meaning of *doctor* in different ways. For example, at a dissertation defence party, probably a person with a PhD degree may be meant. Now, objective theories in the sense of section **1.1** are expected to clarify the way particular contexts cause particular interpretations, whereas this is, as we have seen, not possible.

Robinson suggests a solution to the problem of accounting for the **infinity** of the background information yielding the possible interpretations of (3) which centers on the idea of a distributed system that makes use of probabilistically stored concepts grounded relative to the environment. He presumes that "related things are probabilistically associated together in terms of, and reflecting the strength of, the frequency of their associations in the world" (Robinson 1997, 262). Thus, concepts are assumed "to generalize statistically towards a statistically defined centre, or centres, at the same time that their associative nature automatically results in context-sensitive activation" (*op.cit.*, 263).

Alternatively, we assume that the interpretations of terms like *doctor* in (3) emerge as the result of drawing plausible inferences from a partial basis in the sense of (iv) in section **2.1**. This means, firstly, that on the one hand the infinity of the basis is acknowledged, on the other hand, however, it is also acknowledged that the **only** part of this basis accessible to the hearer, i.e., what he/she encounters is a **partial** basis. Whereas Robinson assumes a **probabilistic and non-inferential** mechanism, we hypothesize a **plausibilistic and inferential** one. Revealing the mechanisms according to which plausible inferences are drawn from a partial basis is one of the major achievements of plausibility theory.

The mechanism of drawing plausible inferences from a partial basis is, as we emphasized in (v) in section **2.1**, **deeply context-dependent**. The fact that plausible inferences are context-dependent is important, because context-dependence is one of the major features of the cognitive basis of pragmatic principles:

> "[...] there are an infinite number of possible contexts for each utterance, so we are faced with the problem discussed earlier about objective systems, needing to specify **the full base** of understanding of an utterance; everything must be represented or derivable from a representation."
> (Robinson 1997, 262; emphasis added)

Therefore, in principle plausibility theory is capable of capturing this aspect of the basis at the outset.

Another relevant feature of plausible inferences is that they are closely connected both to the emergence and the resolution of **inconsistencies**. Since, as we have seen in (vi) in section **2.1**, the conclusion of plausible inferences is not true with certainty, but only more or less credible; new information may turn up any time and can undermine our trust in the conclusions, compelling us to reconsider the situation at issue and to revise both the premises and the inferences from them. It is one of the most attractive impacts of plausibility theory that it is capable of accounting for these mechanisms (see Kertész 2004b, chapter 22; Kertész–Rákosi 2005a and Rákosi 2005 for detailed discussion). Now, the emergence of inconsistencies is one important property of the cognitive basis of pragmatic principles as well:

> "If something in later discourse or activity should appear to **contradict** or **modify** this specific understanding, then a modification of the active understanding is possible; one is only adding information and not contradicting a previous assumption." (Robinson 1997, 266; emphasis added)

Thus, we may maintain that in principle plausibility theory is appropriate for analysing the emergence and resolution of contradictions in the cognitive basis of pragmatic principles.

Finally, in section **1.3** we concluded among other things that it is not unreasonable to assume that with respect to the phenomena Robinson's considerations focus on there is a kind of **cyclic and prismatic** inference and decision process at work. In (vii) in section **2.1** we demonstrated that it is precisely cyclic and prismatic procedures that are at the heart of plausible inferences. Therefore, it is only natural that there may be a kind of correspondence between the mechanisms governing plausible inferences and the prismatic and cyclic relations between pieces of information that constitute the cognitive basis of pragmatic principles.

After having pointed out the appropriateness of plausibility theory for suggesting a possible solution to (P2), what remains to be shown is how plausibility analysis works. So, the next section will be devoted to the analysis of instructive examples.

3.2. Examples

3.2.1. First example

(4) John: Did you go to Bloomingdale's when you went to New York?
Mary: Well, what do you think of my new dress? (cf. Robinson 1997, 257)

Cycle 1. The information at John's disposal is insufficient, because he does not know whether Mary was at Bloomingdale's or not. Therefore, John tries to get rid of the informational underdetermination. On the basis of his cultural knowledge he knows that Bloomingdale's is a department store in New York.

Nevertheless, there is a piece of information which indicates that the answer might be yes: he understands that Mary was in New York where this department store is situated. Thus, a necessary condition[15] for the affirmative answer is probably satisfied:

(5) ⟨If Mary went to Bloomingdale's, then she was in New York.⟩[16]
It is possible that Mary was in New York.

After it has become more credible that Mary was in New York (since John understood so and Mary did not protest against this presupposition of John's question), it is more credible that Mary was at Bloomingdale's.

This inference is an instance of shaded reduction.[17]

Of course, this is only one of several possible arguments which John uses to reach conclusions. As a first approximation, Mary's answer leaves the informational underdetermination of the partial basis untouched. It facilitates drawing further inferences by providing John with a new piece of information. That is, the partial basis which John's inferences rest on are supplemented by the new information that Mary has a new dress.

Cycle 2. John evaluates the situation from another perspective in that he considers the information content of Mary's answer. He attempts to supplement the partial basis by further background information. At this point associations may play a significant role; that is, he has to find cultural knowledge which could be used in the situation at issue. For example:

[15] That Mary was in New York is a necessary condition for her having visited Bloomingdale's, because she could not have been in this department store if she had not gone to New York.

[16] In our analyses "⟨...⟩" will indicate implicit premises.

[17] For lack of space, we cannot introduce the patterns of plausible reasoning systematically and elucidate the patterns we will apply in the examples to follow. Let it be sufficient to refer to Polya (1954); Kertész (2004b); Rákosi (2005). For the reader's convenience, however, in the appendix we enumerate the patterns which we make use of in the analyses.

(6) ⟨It is possible that if Mary has a new dress, then she bought it.⟩[18]

Mary has a new dress.

It is more credible that she bought it.

This inference is an instance of shaded modus ponens.

John's cultural knowledge also includes the information that Bloomingdale's is a department store which sells dresses. This information gives rise to an analogical inference yielding the conclusion that Mary could buy a dress there, too:

(7) ⟨It is possible that if Mary bought a new dress, then she did this at Bloomingdale's.⟩

It is possible that she bought a new dress.

After it has become more credible that Mary bought a new dress (cf. the previous inference), it is more credible that Mary did this at Bloomingdale's.

This inference is an instance of shaded modus ponens.

Each of the above inferences rest on uncertain premises, therefore they yield conclusions whose truth value is uncertain, too. As a result of the peculiarities of the partial basis mentioned in section **2.1**, this means that new information may turn up which contradicts the conclusions already drawn. However, at this point John does not possess information of the latter kind.

However, it is not difficult to construct situations in which he does. For example, the context-dependence of implicatures is indicated by the fact that if John knows that Mary never buys dresses at Bloomingdale's because the only thing she buys there is caviar, then he will draw the opposite conclusion. That is, in this case the last inference of cycle 2 will be as follows:

(8) ⟨It is possible that if Mary visited Bloomingdale's, then she did not buy a dress.⟩

It is possible that Mary did not buy a dress.

After it has become less credible that Mary did not buy a dress, it is less credible that Mary visited Bloomingdale's.

This inference is an instance of shaded modus tollens.

At this point John's knowledge includes an inconsistent set of assumptions, because the result of cycle 1 contradicts the result of cycle 2.

[18] Of course, we cannot exclude that she made the dress herself or that it was presented to her by her husband. That is why it is only possible that she bought it.

Cycle 3. So as to resolve the contradiction, John has to decide which conclusion he thinks to be more plausible. Accordingly, he examines the problem from another perspective:

(9) ⟨It is possible that if Mary visited Bloomingdale's, then she bought caviar.⟩[19]

It is possible that Mary bought caviar.

After it has become less credible that Mary bought caviar (because she did not mention it), it is less credible that Mary went to Bloomingdale's.

(9) is an instance of shaded modus tollens.

The last conclusion would speak for the assumption that Mary did not visit Bloomingdale's. Nevertheless, it is also possible that John reconsiders a certain part of his background knowledge:

(10) ⟨It is possible that if Mary bought a new dress, then she did this exceptionally at Bloomingdale's.⟩

It is possible that Mary bought a new dress.

After it has become more credible that Mary bought a new dress, it is more credible that she bought it exceptionally at Bloomingdale's.

(10) is an instance of shaded modus ponens.

However, it is not at all certain that John can decide between the above alternatives on the basis of the information at his disposal; it may be the case that he will ask further questions.

Of course, (5)–(10) are only some of the possible reconstructions of (4). Nevertheless, they have illustrated how implicatures can be accounted for by plausibility analysis.

3.2.2. Second example

It is worth considering what happens when a third person, say Jim, who does not know anything about department stores in New York, attends the dialogue. Probably he will start his inferences by considering Mary's answer:

(11) ⟨It is possible that if Mary has a new dress, then she bought it.⟩

Mary has a new dress.

It is more credible that she bought it.

[19] This premise is the result of an analogical inference.

(11) is an instance of shaded modus ponens.

Then he tries to find a connection between New York and the purchase of the new dress:

(12) ⟨It is possible that if Mary bought a new dress, then she bought it in a department store in New York.⟩

It is possible that Mary bought a new dress.

After it has become more credible that she bought a new dress, it is more credible that she bought it in a department store in New York.

(12) is an instance of shaded modus ponens.

(13) It is possible that Bloomingdale's is in New York.[20]

It is possible that the department store in which Mary bought her new dress is in New York.

It is possible that Mary bought her new dress at Bloomingdale's.

(13) is an analogical inference.

The inferences which Jim carried out are even less certain than those carried out by John, and accordingly, the plausibility of the conclusions Jim has drawn are less plausible than those drawn by John.

3.2.3. Third example

The Gricean theory explains the following example by the violation of the maxim of relevance:

(14) Peter: Mrs. Johnson is an old hag.
Rose: The weather was beautiful this summer, wasn't it?

We will show that this phenomenon can be explained with the help of our model in the following way.

Cycle 1. First of all, Peter tries to relate his own utterance and Rose's reply. However great his efforts are, he does not succeed in finding a chain of inferences in which these two pieces of information work as premises. Therefore, he notices that Rose's reply is irrelevant.[21]

[20] Jim can infer this information from the fact that it is presupposed by John's question. Cf. cycle 1 in **3.2.1**.

[21] Accordingly, here 'relevance' means that on the basis of the utterance and the information given, one is able to construct a chain of inferences which rule out the informational under- or overdeterminacy; otherwise the utterance is irrelevant.

Cycle 2. It may be the case that Peter, due to this conclusion (and perhaps due to the awkward silence accompanied by Rose's unsympathetic face), is so embarrassed that he puts up with not understanding Rose's reaction and with the fact that he got entangled in such an awkward situation. However, if he has already been in a similar situation, then he may draw an analogical inference which will yield the implicature of Rose's utterance:

(15) ⟨When Betty answered Bruno in an irrelevant way, then Bruno's utterance touched on something unpleasant for the hearers who did not want to speak about this topic.⟩

Rose answered me in an irrelevant way.

It is possible that I said something which touched on something unpleasant for the hearers.

(15) is an analogical inference.

It may also be the case that Peter realizes this conclusion by considering Rose's gestures and the sudden awkward silence. This makes him understand that irrelevance indicates the rejection of the topic:

(16) ⟨When Betty's answer was preceded by an awkward silence and other people also looked disapprovingly at Bruno, then they did not want to speak about the topic Bruno had just touched on.⟩

Rose's answer was preceded by an awkward silence and also others looked disapprovingly at me.

It is possible that I said something which was embarrassing for the others and they did not want to speak about the topic at issue.

(16) is an analogical inference.

(17) ⟨It is possible that when Bruno said something which was embarrassing for the others, and they did not want to speak about the topic at issue, then Betty answered in an irrelevant way, because she wanted to make Bruno notice this.⟩

It is possible that I said something which was embarrassing for the others, and they did not want to speak about the topic at issue.

It is possible that Rose answered me in an irrelevant way because she wanted to make me notice this.

(17) is an analogical inference.

The inferences also show that after the first cycle Peter changed the perspective from which he evaluated the situation.

3.2.4. Fourth example

Levinson (2000) discusses, among other things, basic properties of generalized implicatures. He, too—like Robinson—claims that formal logic cannot serve as a tool for the reconstruction of implicatures. However, unlike Robinson and in accordance with our hypothesis, he concludes that implicatures can be explained by reconstructing them as the results of plausible inferences:

> "There is a [...] problem that has received less attention, what might be called **the logical problem of reconstructing speaker's intentions** [...]. Let us (following Aristotle) assume that we **reason from goals to actions** utilizing a logic of action, or a **practical reasoning**. Now, some theorists have assumed that intention-recognition is simply a matter of running that reasoning backwards [...]: we observe the behavior and figure out the underlying intention by the same rules that we convert intentions into the actions that will effectuate them. The logical problem is that this cannot work, for the simple reason that **for all inference systems one cannot work backwards from a conclusion to the premises from which it was deduced there is always an infinite set of premises which might yield the same conclusion** [...]." (Levinson 2000, 30; emphasis added)

> "What [we] clearly need is a set of **heuristics, mutually assumed by sender and receiver**, that can serve to **multiply** the coded information by a factor of, say, three, by licensing inferential enrichment of what is actually encoded by choice of a specific signal. These heuristics must at the same time **constrain** that enrichment in such a way that the overall message can still be correctly recovered, by guiding (or coordinating) the match between the chosen signal and the recoverable, augmented message." (*op.cit.*, 30f; emphasis added)

According to Levinson, these heuristics rest on a special kind of plausible reasoning, namely **default logic**:

> "GCIs [generalized conversational implicatures] are inferences that appear to go through in the absence of information to the contrary; but additional information to the contrary may be quite sufficient to cause them to evaporate. Thus the mode of inference appears to have two important properties: it is a **default** mode of reasoning, and it is **defeasible**. [...] A reasoning system is said to be **defeasible** (or when instantiated in an argument **nonmonotonic**) if an inference or argument in that system may be defeated by the addition of further premises. [...] Default logics aim to capture a [...] mode of reasoning—namely, the notion of a reasonable presumption, a **ceteris paribus** assumption." (*ibid.*, 42ff; emphasis as in the original)

Nevertheless, besides similarities, there are also crucial differences between our and Levinson's approach. The aim of the following brief anal-

ysis is only to illustrate the difference between our solution and Levinson's; the scope of the present paper does not permit a more extensive treatment of these differences.[22] For example,

(18) At our university some professors go prepared to their lectures.

implicates that

(19) At our university not all professors go prepared to their lectures.

Cycle 1. The phrase *some Xs are Ys* means that there are Xs which are Ys:

(20) There are professors at our university who go prepared to their lectures.

However, *some Xs are Ys* does not say anything about whether all Xs are Ys; its information content leaves both possibilities open.

Cycle 2. If the hearer wants to do away with the informational underdetermination for some reason,[23] he or she has to examine the situation from another perspective. The following consideration presents itself immediately:

[22] It is interesting that the example we chose seems to refute Levinson's claim that default conclusions are cancelled if contradicting information is made available.

[23] Experiments with children show that **we need some reason to go beyond the literal meaning of the utterances**: "If preschoolers, unlike adults, cannot readily infer the pragmatic nature of the task, and are not given adequate motivation to go beyond the truth conditional content of the utterance, they may readily settle for a statement which is true but does not satisfy the adult expectations of relevance and informativeness." (Papafragou – Musolino 2003, 269)

For adults the use of certain phrases, i.e., knowledge of language may fulfil this task (for example *some*, *start*). But the presence of such phrases is not a necessary condition for implicatures: "[...] scalar inferences can be induced by partial contextual orderings, which may be supplied by stable world knowledge or created in a completely ad hoc fashion [...]:

A: Did you get Paul Newman's autograph?
B: I got Joanne Woodward's.
→ B did not get Paul Newman's autograph." (Papafragou – Musolino 2003, 258)

(21) ⟨It is possible that if there were no professor who would go unprepared to his lectures,[24] then the speaker would have said that *At our university all professors go prepared to their lectures.*⟩

The speaker did not say that *At our university all professors go prepared to their lectures.*

It is less credible that there is no professor who goes unprepared to his lectures (i.e., it is more credible that there are professors who go unprepared to their lectures).

This inference is an instance of shaded modus tollens.

Cycle 3. Our cultural knowledge also contains information which contradicts this conclusion. Namely, one of the prototypical features of professors is that they go prepared to their lectures:

(22) Professors go prepared to their lectures.

The conclusion obtained within cycle 2 and (22) results in inconsistency which has to be resolved by the hearer somehow.

Cycle 4. (22) is an element of the speaker's cultural knowledge as well.[25] Despite this, he or she has used *some* instead of *all* in (18). So, it is possible that he or she does not agree with (22).

(23) ⟨It is possible that if the speaker had agreed with the statement that *At our university all professors go prepared to their lectures*, he or she would have uttered this.⟩

The speaker did not say that *At our university all professors go prepared to their lectures.*

It is less credible that the speaker agrees with the statement.

(23) is an instance of shaded modus tollens.

This is an argument for the implicature mentioned in (19). The hearer's task, then, is to consider the strength of the arguments for and against the implicature.

3.2.5. Summary

The analyses of the examples were intended to illustrate that it is possible to explain different kinds of implicatures by making use of plausibility

[24] I.e., if all professors go prepared to their lectures.

[25] This is an analogical inference.

analysis. The analyses have shown that implicatures can be assumed to work along the same lines as plausible inferences do. That is, they are characterized by

(a) drawing inferences from a partial basis,
(b) using different patterns of plausible inferences,
(c) the emergence and resolution of contradictions,
(d) context-dependency,
(e) the cyclic and prismatic revaluation of the information available.

4. On (S1′)

In section **1.1** we raised two closely related problems: a metascientific and an objectscientific one. Up to this point we tried to solve the objectscientific problem (P2) by the application of plausibility analysis. Nevertheless, the method of our **scientific** method, namely, plausibility analysis is no less problematic than the nature of implicatures: our findings depend on the effectivity of this method to a considerable extent. Therefore, it is important to reflect on **our own** argumentation **meta**scientifically so as to clarify some of the methodological difficulties we encounter:

(a) Our own line of reasoning started from uncertain premises as well: since we had no convincing evidence at our disposal, we assumed only hypothetically that the inferences we discussed in the previous section were or could have been carried out.
(b) This means that there was only a partial basis which our inferences could rely on.
(c) Not only the persons in the above examples, but we, too, as researchers had to struggle with the informational underdetermination of the partial basis.
(d) The way we applied plausibility analysis is only one side of the prism through which we observed the object of our investigations, namely, the cognitive basis of pragmatic principles.
(e) Accordingly, we ourselves as analysts had to proceed cyclically and prismatically by making use of the perspectives of cognitive psychology and linguistics, and above all of our own cultural knowledge. For example, as we have seen, particular aspects of the theory of associations which Robinson argued for could be integrated with our approach, although in a somewhat reinterpreted way: they may give an answer to the question of how the premises which contribute to filling the informational gap in the partial basis are selected.

In what follows, we will make a few brief remarks on how this kind of cyclic and prismatic reasoning works with respect to the construction of pragmatic theories. Accordingly, we will motivate our hypothesis (S1′) as a possible solution to (P1). However, we will not go into a detailed discussion, because elsewhere we put forward possible applications of plausibility analysis to theory construction in linguistics.[26]

As we saw in section **1.1**, Robinson claims that we must depart from a theory of cognition and proceed toward a descriptive theory of linguistic behaviour. The solution proposed by Robinson to (P1) consists in assuming a hierarchy of systems where every level is determined by a lower level. These different, hierarchically related systems correspond to different theories.[27]

Accordingly, in Robinson's view, the relationship between the object- and the meta-level is always unidirectional. However, we showed in section **1.3** that this methodology inevitably runs into an infinite regress which can be interrupted only by stopping at the level at which there is no avoiding the identification of the structures of the theoretical description with structures of the mind. Moreover, we also saw that the researcher uses his/her own cultural knowledge as a point of departure and projects it onto a lower level system. Now, the question arises whether our approach results in the same problems, namely, those summarized in (P1)(a)–(d).

To begin with, let us mention that Hample (1985/1992)—in referring to O'Keefe (1977/1992)—differentiates between three perspectives of investigating argumentation. **Argument**$_1$ examines the **products** of reasoning; it handles inferences as being static representations of reports

[26] See Kertész (2004a;b); Kertész Rákosi (2005a); Rákosi (2005).

[27] "I have attempted to show how **regularities in one theory may be emergent from the behaviour of a lower-level system**. [...] By relating this model to the regularities described at a linguistic level of behaviour we do avoid the problems created by directly instantiating these linguistic models as cognitive theories. But, because this model is also a description, we are left with the question of whether or not we will run into the same problems as before, only at a different level of description. Unfortunately, the answer here may well be **yes**. It is therefore necessary to take the relationship between the two levels of modelling I have discussed one step further. [...] In this view, we must use our objective theories not as ends in themselves but as **methodological tools to point to regularities in one system as emergent from another**. [...] This means we will need **multiple levels of description** capturing all of the situational, behavioural, and biological phenomena that interact to create organized behaviour. None of these, in isolation, will be an adequate model of cognition." (Robinson 1997, 268f; emphasis added)

on the results of drawing inferences. It suggests that the aim of argumentation theory is the analysis of such reports. The paradigm example of this view is formal logic.[28] Seen from the point of view of **argument$_2$**, argumentation is a **process** which aims at influencing the hearer's beliefs or actions. In this respect, argumentation theory should focus on revealing the factors underlying argumentation as **interaction**. The third view, i.e., **argument$_0$**, centers on the **mental processes** governing the construction of arguments. It seeks to find out to what extent and in what way mental processes are constitutive of the peculiarities of arguments. Thus, assuming that argumentation in general and inferences in particular have some kind of mental reality is one of the hypotheses widely discussed in the contemporary literature of argumentation theory.

Hample introduces a further distinction, namely that between **weak** and **strong claims for argument$_0$**. The weak view focuses on argument$_1$ or argument$_2$ and attributes less relevance to the cognitive aspects of argumentation. It suggests a methodology which takes the opposite direction to Robinson's proposal: we should choose the investigation of argument$_1$ or argument$_2$ as our starting point and proceed towards argument$_0$, because the structure of argument$_0$ can be entirely reconstructed from the investigation of argument$_1$ or argument$_2$. Thus, we can construct a theory of argument$_0$ if we proceed from the theory of argument$_1$ or argument$_2$ towards a theory of argument$_0$. It is clear that this attitude is similar to the point of view of the pragmatic theories mentioned in this paper.

Strong claims for argument$_0$ (which, according to Hample, are rarely encountered) take the opposite direction: they try to understand argumentation by starting from the mental and proceeding towards its public manifestations. Argumentation in this sense is not something special, because it involves a wide variety of cognitive events such as perceiving, remembering, associating, etc. (Hample 1985/1992, 99). This reminds us of Robinson's conception, according to which one may understand argument$_0$ only if one understands the whole of cognition.

[28] "In the everyday sense of the word, inference is a thought process during which from given knowledge we obtain new knowledge that has not been included explicitly [...] in the original knowledge. However, if inference is a mental activity, and logic deals with inferences, then the latter still studies certain aspects of thinking. We have no direct insight into thought processes, we can study only their linguistic manifestations. [...] The task of logic can be only the study of the relationship between the premises and the conclusion." (Ruzsa 2000, 10; our translation)

Comparing our approach with these two views, it seems to be the case that our proposal can be treated either as an instance of the weak view according to which plausible inferences are objectifications of our own cultural knowledge about patterns of public inferences; or, alternatively, they are instances of the strong view, thus they can be interpreted as constituting a new element in Robinson's 'distributed system'. However, there may be a third and more convincing possibility as well:

> "The weak view has a sterile conception of invention and seemingly little room for creativity. [...] Its portrait of the arguing person seems deterministic and only vaguely humane. [...] The strong view, on the other hand, enmeshes argument_0 so thoroughly in psychology that arguing mentally ends up having no special character at all. **An individual scholar** need not maintain that one set of claims is superior to the other. One reasonable tactic is to **try to shade one set into the other, in an attempt to resolve the tensions between them.**" (Hample 1985/1992, 100f; emphasis added)

In fact, this strongly resembles that kind of cyclic and prismatic inference procedures which we discussed in section **2.1** and applied in section **3**.

These observations can be generalized in the following way. On the one hand, the peculiarities of the linguistic level vastly underdetermine the cognitive level, because there will always be a lot of incompatible theories which claim to describe certain aspects of linguistic behaviour, while we know too little about the way cognition works. On the other hand, the cognitive level has to be considered fundamental. It is only natural therefore that a cyclic way of proceeding is required in the course of which we as researchers try to correlate the characteristics of the linguistic and cognitive level again and again, from different perspectives, looking for solutions which can resolve the inconsistencies between the hypotheses drawn from them. Thus, our answer to the question asked at the beginning of this section is clearly **no**.

Therefore, we are justified in interpreting the above quotation as supporting our hypothesis according to which theory formation in pragmatics proceeds along the same lines as plausible reasoning in general and implicatures in particular. That is, reasoning in the field of pragmatics can be characterized by the same properties we summarized with respect to the cognitive basis of pragmatic principles which underlie implicatures, namely,

(a) drawing inferences from a partial basis,
(b) using patterns of plausible inferences,
(c) the emergence and resolution of contradictions,

(d) context-dependency,
(e) the continuous cyclic and prismatic revaluation of the information available.

There are two ways to evaluate this finding from a metascientific point of view. Firstly, the sub-problems of (P1) may turn out to be just manifestations of this kind of scientific reasoning—that is, (P1)(a)–(d) can be interpreted in terms of cyclic and prismatic reflection on the object of investigation rather than as mistakes such as the category error mentioned, the circularity of argumentation, interpretations with unexplicated criteria, or the fact that researchers objectify their own cultural knowledge as pragmatic principles. This kind of reinterpretation of the phenomena which Robinson labelled as methodological mistakes clearly legitimizes 'objective theories'. The point, then, is that **theory formation in pragmatics works in a very different way** (i.e., along the principles of plausible reasoning) from what is commonly assumed. Secondly, the application of cyclic and prismatic reasoning in the course of the construction of pragmatic theories may lead to the opposite result as well: namely, to realizing that these problematic cases are really errors. But in certain situations it is one of the primary functions of cyclic and prismatic reflection to rule out cases which are real mistakes and to distinguish them from the continuous revaluation of our scientific knowledge base.

5. Conclusions

As we saw in section **2.1**, plausible reasoning is universal in that it works with respect to both everyday behaviour and scientific reasoning. Accordingly, it is the same principles which may be used to capture both object-scientific problems such as, for example, the nature of implicatures, and metascientific problems such as the nature of scientific reasoning. Nevertheless, the universality of plausible reasoning is not unlimited and must not mean uniformity. Rather, as the quotation in (viii) in section **2.1** emphasizes, the way plausible reasoning is manifested differs from domain to domain. Then, two crucial problems arise:

(a) How do the two cases of plausible reasoning we considered in this paper — i.e., as a constitutive component of the cognitive base of pragmatic principles and as a constitutive component of scientific reasoning — differ?

(b) What is there in common between, on the one hand, drawing plausible inferences in everyday discourse such as the reasoning underlying implicatures, and, on the other, drawing plausible inferences in pragmatic theories whose task is to reveal these inferential mechanisms in everyday communication?

It goes without saying that these questions have to be left open for now and should be tackled by future considerations. Therefore, the line of argumentation put forward in this paper seems to pave the way for starting systematic investigations into the argumentational structure of linguistic theories—this is a field of which very little is known and that which is thought to be known, is probably easy to refute.

Appendix: Patterns of plausible reasoning applied in section 3.2[29]

Shaded reduction

It is possible that if A, then B.
It is possible that B.

After verifying B, A is more credible.

It is possible that if A, then B.
It is possible that B.

After B has become more credible, A is more credible.

Shaded modus tollens

It is possible that if A, then B.
It is possible that B.

After B has become less credible, A is less credible.

It is possible that if A, then B.
Not B.

A has become less credible.

[29] Other versions of these schemes are possible as well, varying in the degree of the plausibility of the different premises; cf. Polya (1954, 26); Rákosi (2005).

Shaded modus ponens

It is possible that if A, then B.
It is possible that A.

After verifying A, B is more credible.

It is possible that if A, then B.
It is possible that A.

After A has become more credible, B is more credible.

Analogical inference

a_1 has the properties S and T
a_2 has the properties S and T
...
a_n has the properties S and T
a_{n+1} has the property S

---

a_{n+1} also has the property T

References

Benoit, William L. – Dale Hample – Pamela J. Benoit (eds) 1992. Readings in argumentation. Foris, Berlin & New York.

Dolinina, Inga 2001. 'Theoretical' and 'empirical' reasoning modes from the neurological perspective. In: Argumentation 15 : 117–34.

Grice, H. Paul 1975. Logic and conversation. In: Peter Cole – Jerry L. Morgan (eds): Syntax and semantics, vol. 3: Speech acts, 41–58. Academic Press, New York.

Hample, Dale 1985/1992. A third perspective on argument. In: Benoit et al. (1992, 91–116).

Kertész, András 2004a. Cognitive semantics and scientific knowledge. Case studies in the cognitive science of science. Benjamins, Amsterdam & Philadelphia.

Kertész, András 2004b. Philosophie der Linguistik: Studien zur naturalisierten Wissenschaftstheorie. Narr, Tübingen.

Kertész, András – Csilla Rákosi 2005a. Inconsistency and plausible inferences in an analysis of German affricates. A case study in the philosophy of linguistics. In: Language Sciences (forthcoming).

Kertész, András – Csilla Rákosi 2005b. Whole-part and part-whole inferences in generative and cognitive linguistics. In: Acta Linguistica Hungarica (forthcoming).

Levinson, Stephen C. 2000. Presumptive meanings: The theory of generalized conversational implicature. MIT Press, Cambridge MA.

O'Keefe, Daniel J. 1977/1992. Two concepts of argument. In: Benoit et al. (1992, 79–90).

Papafragou, Anna – Julien Musolino 2003. Scalar implicatures: Experiments at the semantics–pragmatics interface. In: Cognition 86 : 253–82.

Politzer, Guy – Gaëtan Bourmaud 2002. Deductive reasoning from uncertain conditionals. In: British Journal of Psychology 93 : 345–81.

Polya, George 1948. How to solve it. Princeton University Press, Princeton NJ.

Polya, George 1954. Patterns of plausible inference. Oxford University Press, Oxford.

Rákosi, Csilla 2005. Nyelvészeti elméletek argumentációs szerkezetének elemzése [The analysis of the argumentation structure of linguistic theories]. Doctoral dissertation, University of Debrecen.

Rescher, Nicholas 1976. Plausible reasoning. Van Gorcum, Assen & Amsterdam.

Rescher, Nicholas 1987. How serious a fallacy is inconsistency? In: Argumentation 1 : 303–16.

Rescher, Nicholas – Robert Brandom 1979. The logic of inconsistency. Blackwell, Cambridge MA & Oxford.

Robinson, Edward A. 1997. The cognitive foundations of pragmatic principles: Implications for theories of linguistic and cognitive representation. In: Jan Nuyts – Eric Pederson (eds): Language and conceptualization, 253–71. Cambridge University Press, Cambridge.

Ruzsa, Imre 2000. Bevezetés a modern logikába [An introduction to modern logic]. Osiris Kiadó, Budapest.

Sperber, Dan – Deirdre Wilson 1986/1995. Relevance: communication and cognition. Blackwell, Cambridge MA & Oxford. 1st/2nd edition.

Walton, Douglas 2001. Abductive, presumptive and plausible arguments. In: Informal Logic 21 : 141–69.

Woods, John – Andrew Irvine – Douglas Walton 2000. Argument: Critical thinking, logic and the fallacies. Pearson, Toronto.

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THE CONCEPT OF PREFERENCE AND ITS MANIFESTATION IN HUNGARIAN VERBAL CONFLICT SEQUENCES*

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Preference is an operative notion of sequential organization and interpersonal understanding in conversation analysis. The complexity of the phenomenon that we are attempting to grasp through this notion has manifested itself in the seemingly controversial widening of the interpretation of the notion. In this paper I argue that preference can be interpreted through an inference rule as a consequence of the simultaneous but not equal manifestation of pragmatic principles; a deeper and uncontroversial interpretation of the notion is possible if, in addition to a structural inference rule and interpersonality principles, we take into consideration the role of rationality principles as well. In every communicative situation an interpersonal concern and a topical concern is operative; in consensus-oriented contexts preference structure is regulated by interpersonality principles that govern interpersonal relations and self-projection, while in conflict-oriented discourse the most important role is played by rationality principles. Approaching preference from the perspective of pragmatic principles may prove instrumental in integrating conversation analysis more closely with new directions and results of pragmatic research.

1. Aims

In this paper I attempt to clarify the nature of preference, considering that the use of this classical concept of conversation analysis (CA) which has an important part in interpreting utterances seems to have become confused and vague in the course of time. After reviewing the role of preference in CA in **2.1**, in **2.2** through **2.5** I provide a critical survey of the interpretations of the term in the pragmatics literature. As a result of a reconsideration of the approaches at this issue, in **2.6** I suggest a complex interpretation of preference which unifies the different views from the perspective of pragmatic principles. In section **3**, I investigate the manifestation of preference organization in verbal conflict sequences. In

* I would like to thank the two anonymous reviewers for their valuable comments and suggestions which helped improve the paper. All remaining shortcomings are, of course, my own responsibility.

this part of this paper I argue that in order to grasp the nature of preference it is essential to investigate forms of agreements and disagreements in conflict talk. Section 4 summarizes the results.

2. The concept of preference

2.1. The scope of preference

Preference (preference organization) is a key analytical concept of CA, operative both in description and intersubjective understanding, because it is concerned with how actions are constituted and responded to, and how intersubjective understanding is achieved.

According to the CA literature, preference regulates, first of all, the choice among alternative but nonequivalent second parts of adjacency pairs, as well as the interpretation of the realized turns (Levinson 1983; Heritage 1984; Pomerantz 1984; Sacks 1995a;b). Although actions produced as first parts of adjacency pairs allow different reactions, they evoke expectations for specific preferred seconds. When the preferred alternative is not taken, it is experienced as being relevantly absent. Its noticeable absence is routinely used as a basis for inferences.

Preference is referred to as one of the most important discoveries of CA, because it was central to the classic, early work on repair (Moerman 1977; Schegloff et al. 1977), responses to compliments (Pomerantz 1978), the organization of reference to others (Sacks–Schegloff 1979), responses to accusations (Atkinson–Drew 1979), and the placement of agreements (Sacks 1987).

As Pomerantz (1984) points out in her research into some features of second assessments in everyday friendly conversations, agreements are the preferred next actions after proffering initial assessments. Absences of forthcoming agreements are interpretable as instances of (as yet) unstated disagreements. Disagreements as well as other possible reactions (such as no talk, disagreements weakened by partial agreements, requests for clarification, challenging a presupposition or the competence of a coconversant) are less preferred than agreements, that is, they are dispreferred (to various degrees). Nowadays preference survives primarily in work on agreement and disagreement (Vuchinich 1990; Greatbatch 1992; Kotthoff 1993; Gruber 1996; Hayashi 1996; Gruber 1998; Boyle 2000).

In CA, preference is discussed largely in terms of responses to actions, but, according to the original concept established by Sacks (1995a;b;

in particular Sacks 1995b, 367–9 and 444–52), the scope of preference is very much greater. It is concerned as much with initial actions as with responses, because preference is a feature of the constitution of all actions.[1]

In addition, preference operates not only within adjacency pairs but also across entire alternative sequences ranking sets of sequence types, due to the possibility of the choice among various realizations of a sequence type and also among alternative sequence types (Schegloff et al. 1977; Schegloff 1979; Levinson 1983).[2]

Sacks regarded preference as a technical concept. Others (Atkinson –Heritage 1984; Bilmes 1988; 1991; Kotthoff 1993) emphasized also the original idea at later times, because the structural character of the notion has lost its importance in comparison with a psychological interpretation and a statistical approach to it as well. The differences in explicating the phenomenon of preference have given rise to some confusion that has resulted in establishing conflicting views on this matter, which I will discuss in sections **2.2–2.5** below.

2.2. A structural approach to preference

Sacks did not define preference exactly in his writings and lectures either (which enabled researchers to extend the meaning of the term later), he demonstrated what he has meant by preference by means of examples. In a lecture in April, 1971 (1995b, 367–9), Sacks said that there are preferred ways of formulating invitations: if one is inviting somebody for an evening during which dinner will be served, then that sort of information should be clearly included in the invitation or the invitee will have reason to assume that dinner will not be served. On the other hand, if the invitation is for an evening in which conversation will occur, this piece of information need not be included in the invitation. "Dinner" is a "first-preference invitation": if the formulation you select is not a first preference, then you are indicating that a first preference is not present. It is obvious that Sacks is not talking about preference in a psychological sense; he is not concerned with what any or all of the participants would prefer to do or say.

[1] For examples, see section **2.2** below and Boyle (2000, 599).

[2] For more details, see section **2.3**.

Bilmes (1988, 163) called attention to the invalidity of complementary inferences: if one displays one's work, a painting, an essay, or whatever, there is a preference for expressions of approbation from the person to whom the work is shown. That is, if no praise is forthcoming, it is relevantly absent, leading usually to the inference that the work has been judged unworthy of praise. The fact that the work is not explicitly dispraised, on the other hand, does not lead to the complementary inference that the work has been judged too good to be dispraised.

Bilmes (*ibid.*) highlighted two aspects of Sacks's notion of preference. One is the principle of ordering: (in the appropriate situation) do (or say) X, unless you have reason not to. This principle can be extended to include any number of ordered options: do X, unless you have reason not to, in which case do Y, unless you have reason not to, in which case do Z, and so forth. The other aspect manifests itself in the recognition that the existence of such rules of order is a basis for members' inferences. It is when the rules of order are used by members to make such inferences that we can speak of preference in the technical sense.

Bilmes (*op.cit.*, 163–5) distinguished two types of preference, establishing a type U (unusual, unexpected) preference and a type R (relevant absence) preference.

Type U preference is based on a rule of the following form: if A is speaking to B on some subject, and A knows something unusual or unexpected about the subject which might be of significance to B, then A should mention it to B. Our inference is based on the assumption that the speaker follows the rule: if nothing unusual is mentioned, then we may conclude that the speaker knows of nothing unusual that might warrant mention.[3] If the preferred alternative is not mentioned, it is not present.

The operative notion of type R preference is relevant absence. As mentioned in section **2.1** above, certain contexts make relevant some preferred action. When that action is not taken, it is relevantly absent. Its absence is noticeable and a basis for inference.[4] (Type U preference is

[3] Bilmes (*op.cit.*, 164) illustrates this point with the following example: if we are invited to a party, we do not go wearing a costume unless we are specifically advised that it is a costume party, and it is ordinarily the responsibility of the one issuing the invitation to volunteer such information on his or her own initiative. When we arrive in ordinary dress and discover that it is a costume party, this may be the basis for recriminations and apologies.

[4] Dinner was not mentioned in the invitation because no dinner will be served. Our work was not praised because it was not felt to be worthy of praise by our audience.

also, in a way, a matter of relevant absence, that is, the absence of a preferred item is meaningful, but not necessarily noticeable.)[5]

The rule generalized by Bilmes (*op.cit.*, 165) is formulated as follows: preference operates with three (or more) alternatives: a preferred (X), a nonpreferred (Y),[6] and no mention of X or Y (N).[7] The principle is that, if X is preferred, N implies Y; conversely, if N implies Y, then X is preferred. This rule has been extended primarily in the terms of type R preference over analysing adjacency pairs and alternative sequences as well.

2.3. A (social) psychological dimension of preference

According to Bilmes (1988), the loss of the purely formal character of preference is due, in part, to confusion between *preference* in its everyday usage and *preference* as a technical notion. The standard psychological sense of preference has a precedent in a lecture by Sacks (1987), first presented in 1973.[8]

Following Sacks, Pomerantz (1984) added to the original criterion of preference (that is, relevant absence) the notion of markedness. Having observed that dispreferred responses are routinely associated with features that delay the production of the relevant response, for example, gaps, hesitations, qualifiers, weak agreements,[9] side sequences, and so on, Pomerantz assumed that these features, called dispreference markers, correlate to dispreferred responses. Thereafter, it has been suggested in the CA literature that some features of turn/sequence organization operate with respect to the preference/dispreference status of actions: preferred

[5] Bilmes (*op.cit.*, 164–5) demonstrates interesting ways in which type U and type R preferences may interact.

[6] Y may include a set of nonpreferred actions.

[7] Bilmes (*ibid.*) illustrates the rule regarding both types: with type U preference, we can mention that something unexpected will occur, for example, that it will be a costume party (X); we can mention that nothing unexpected will occur, for example, that it will be an ordinary party, with no special dress (Y); or we may omit any mention (N). Likewise, with type R preference, we can mention something preferred, for example, that dinner will be served; we can mention something nonpreferred, for example, that dinner will not be served; or mention neither.

[8] The everyday usage is discussed in Atkinson – Drew (1979) and Owen (1983) as well.

[9] Weak agreements preface disagreements by agreeing with the prior speaker's position.

responses are direct, often abbreviated, structurally simple, and typically immediate, dispreferred ones are typically indirect, structurally elaborated, and delayed. In explaining the phenomenon, Pomerantz (1984, 77) refers to sociability, support, and solidarity, that is, to psychological motivation.

Bilmes (1988, 173–4; 1991, 464–6) suggested that, although dispreference markers are associated with preference, they are part of a different, partly independent, phenomenon. Delays are, in fact, expressive of the speaker's reluctance to produce the response which should follow, consequently Bilmes refers to them as reluctance markers. He pointed out that reluctance markers do not necessarily accompany dispreferred utterances and may equally occur with preferred alternatives.

Accounts occurring very frequently in dispreferred actions are carefully formulated explanations for disagreements and refusals (Levinson 1983, 334). Considering that preferred actions do not include accounts, in the occurrence or absence of accounts we could at first sight expect a criterion of preference in a psychological sense. Bilmes (1991, 466) pointed out that it is inappropriate to correlate accounts with preference, because accounts regularly occur with disagreements and refusals, whether or not they are preferred.[10]

According to Taylor and Cameron (1987, 113–4), there is an obvious functional connection between some dispreferred second parts to adjacency pairs and the formal features of delay, mitigation, apology, etc., with which they are characteristically produced; namely, that their speakers would prefer (in the ordinary sense of the term) not to have been put in the position where they have to decline to produce the second pair part, which the first speakers obviously would have preferred (again, in its ordinary sense) to hear. Taylor and Cameron are of the opinion that it is inappropriate to attempt to maintain the early ethnomethodological claim that the differences between preferred and dispreferred actions are purely formal, with no basis in the truly psychological sense of preference: to say that one of two alternative acts is preferred to another is not to imply anything about the relevant speakers' own wishes, desires or motives. Others, Levinson (1983), Owen (1983), and Heritage (1984) among them, have acknowledged the psychological function of preference organization, too, by tying it to the notion of interactional "face work" established by Goffman (1955).

[10] For further details regarding preferred disagreements, see section **3**.

Toolan (1989) agrees with Taylor and Cameron (1987) to the extent that they emphasize the psychological and evaluative dimension of preference. At the same time, he criticizes them for attributing the psychological preferences to individual speakers. Toolan (*op.cit.*, 264) argues that the psychological "tenor" carried by the preference organization is a collective normative protocol and may have little to do with the particular preferences of particular speakers in specific contexts. Interactants know that the collective social preference for example for invitations is to be met with acceptance, but that the collective preference pattern may not reflect the preferences of specific interactants. Preference organization is rooted in the norms and psychological preferences of the society and not the individual, as Toolan suggests (*ibid.*).

Concerning preference, Jacobs and Jackson (Jacobs–Jackson 1982; Jacobs 1987), emphasize the importance of such psychological notions as conventional desires or intentions accompanying speech acts[11] (a request is conventionally recognized to express a desire that the other will comply to; the conventional desire expressed by an invitation is to accept it). Thus, a preferred response is one that fulfills the conventional desire or intention of the speech act, whether or not that conventional desire coincides with the speaker's actual desire. It is obvious that the conventions constituting speech acts have their roots in the norms of society.

The psychological interpretation of preference is striking also in essays which discuss the manifestation of preference in ranking alternative sequences. In their research on the organization of repair, Schegloff et al. (1977) revealed the following set of preferences (from the most preferred to the least preferred): preference 1 is for self-initiated self-repair in own turn (or in the transition space); preference 2 is for other-initiated self-repair in the third turn; preference 3 is for other-initiated other-repair in the fourth turn; and, finally, preference 4 is for other-initiated other-repair in the second turn, without inviting self-repair. Thus, the handling of repair coincides with the choice among alternative sequences.

Jefferson (1983) suggested that preference 4 above should be ranked higher (as preference 2) in the hierarchy if a speaker's error is replaced by the addressee within an utterance which includes important information besides repair. Jefferson accounts for the high ranking of this solution (called embedded correction) by pointing out that it avoids the risk of overtly challenging the speaker's competence.

[11] Investigating verbal interaction, Jacobs and Jackson unify the concepts and methods of CA and speech act theory.

Investigating the initial turns of telephone calls, Schegloff (1979) set up a hierarchy of preferences in a similar way. He found that for telephone recognitions between known parties the preference is for both caller and recipient to provide the minimal cues (at best only greetings) they judge sufficient for the other to recognize the speaker. Overt self-identification is dispreferred because it challenges the familiarity of friendship.

Reviewing the CA literature in connection with requests, Levinson (1983, 360–1) suggests that after a pre-request there may be a preference for the avoidance of requests altogether. He sets up the following preference ranking operating over three kinds of sequences: most preferred is a pre-request – response to a non-overt request sequence; next preferred is a pre-request – offer – acceptance of an offer sequence; finally, the least preferred alternative is a pre-request – go ahead – request – compliance/refusal sequence.

To invite an offer seems to be preferred to a request sequence because explicit requests risk refusal (Schegloff 1979, 49), which is a face threatening act (FTA). A motivation for applying pre-requests is avoiding an action (the request) that could obtain a dispreferred response (a rejection) and hence the checking of the most likely grounds for refusal (Levinson 1983, 356–64). In addition, requests threaten the addressee's negative face wants intrinsically by indicating (potentially) that the speaker does not intend to avoid impeding the addressee's freedom of action, as Brown and Levinson (1987, 65) point out.

To summarize the approaches mentioned before, Schegloff (1979), Jefferson (1983) and Levinson (1983) attribute the preference ranking operating over alternative sequences and sequence types to social psychological motivation: by choosing a preferred alternative, the speaker can avoid an action threatening his/her own face or the face of the addressee.

With reference to Heritage (1984, 268), Brown and Levinson (1987, 38–40) argue that face considerations seem to determine which kinds of responses are preferred vs. dispreferred. In their eyes, agreement is preferred because disagreement is an FTA; self-repair is preferred because correction by other may imply that self is incompetent; acceptances of offers or requests are preferred because the alternative refusals would imply lack of consideration; and so on. Similarly, they take many kinds of pre-sequences to be motivated by face considerations.

2.4. A statistical approach to preference

Several conversation analysts — Schegloff, Jefferson and Sacks (1977), Sacks and Schegloff (1979), Levinson (1983), among others — tried to account for preference organization relying on frequency distribution. Arguing that people do what they prefer to do, and, so, if people overwhelmingly do a certain thing, this indicates a massive preference, they arrived at the conclusion that more frequently occurring alternatives must have a preferred status. Resisting the temptation to regard frequency of occurrence as a criterion of preference, most authors have used a more careful phrasing claiming that frequency distribution is evidence of preference organization. Schegloff et al. (1977, 362) found the fact that self-correction is "vastly more common than other-correction" to be "gross, prima facie evidence" of the preference for self-correction.

Bilmes (1988, 192) disapproved of the statistical approach to preference for two reasons. On the one hand, he criticized it because of the influence of the psychological sense of preference. On the other, he pointed out that the authors mentioned above have turned from the concept of preference to emphasizing ordering;[12] that is, they were trying to account for what people do rather than for the inferences that people draw. Bilmes emphasized that preference governs interpretation, not production. However, if, contrary to him, we accept the social psychological motivation of preference, we can suppose with good reason that production corresponds to the expectations evoked by the preference/dispreference status of actions, because people follow the norms of society whenever possible.

2.5. A complex interpretation of preference

The latest interpretation of preference has been provided by Boyle (2000), after the publication of Sacks's lectures and building on them. Boyle gives an interpretation of preference that both accommodates the varied interpretations and provides a clear and simple account of the notion. He emphasizes that the clear and all-encompassing criterion of preference, in a Sacksian approach, is noticeable absence and accountability. At the same time, unlike Bilmes (1988), he does not consider connecting the

[12] Moreover, since a prescribed alternative may be unavailable, there is still a question of whether frequency of occurrence is strong evidence even of a principle of ordering (Bilmes 1988, 172).

notion of preference with markedness, frequency distribution and face work as a false interpretation of preference but regards them as valid aspects of preference.

Boyle (2000, 586–7) accepts as valid the correlation of preference with markedness and frequency distribution to a limited degree (i.e., in the case of some sequences) and attributes the generalization of such correlations to the widely known work of Levinson (1983). Comparing views on the relationship of preference and face work, Boyle (2000, 588) points out, following Czyzewski (1989), that regarding preference as a consequence of social solidarity raises the question **why** actions are constituted as preferred or dispreferred. True to its ethnomethodological origins, however, CA is interested in finding out **how** speakers produce and understand preferred or dispreferred actions.[13]

According to Czyzewski (1989, 52–3), preferred actions contribute to the maintenance of social solidarity directly, while dispreferred actions do so indirectly; that is, the "social solidarity" argument is important, but it is not an adequate account of the phenomenon of preference. Nevertheless, Boyle states that in order to fully understand the concept of preference it is necessary to ally the issue of **why** individuals act as they do to the question of **how** they construct preferred and dispreferred turns.

Boyle considers social solidarity strengthening face work, markedness, and frequency distribution as such aspects of preference which do not constitute criteria of preference. Referring to Sacks's analyses along these lines, he argues that the criteria of preference, as demonstrated by Bilmes (1988) already, are noticeable absence and its (normative) accountability. The occurrence of a dispreferred action, that is, the non-occurrence of a preferred, conditionally relevant action, calls for explanation. Here, Boyle (2000, 590) is the first to make a distinction between two types of dispreferred actions. One of them invokes no negative consequence or sanction. In this case, from an individual's failure to offer a greeting, for example, one might infer that the other person is deep in thought or does not recognize one, etc. These are acceptable accounts from which no sanctions should follow. In the other case, in a quite contrary fashion, the noticeable absence of an expected action gives rise to negative inferences and to sanctions: when another person fails to offer a greeting, one might account for the absence of the greeting by deciding that the action was deliberate and make negative inferences about the other person's character and behaviour.

[13] Bilmes (1988) called attention to this distinction as well.

This distinction was not recognized before, and only the deliberate and sanctionable type of dispreferred actions was discussed in the literature. According to Boyle, this tendency might be a consequence of the implicit overgeneralization of the principle "trying to avoid the dispreferred action", at work in speakers' competence and recognized by Levinson (1983, 333). From this it follows that if one does not try to avoid a dispreferred action, this will be considered deliberate. However, it is clearly impossible, and not necessarily desirable, to avoid actions that are merely noticeable and accountable but not sanctionable.

The question that arises is that, if there is no explicit explanation, how does the co-conversant choose between the two possible accounts of the dispreferred action? Boyle answers this question only indirectly: the choice between the accounts is greatly influenced (even in the case of an explicit explanation) by the indexical knowledge of the situation and the co-conversant, the importance of which factors is stressed by Boyle (2000, 594–7) when, following Sacks, he points out how greatly these influence the speaker's decision in what is a preferred and what is a dispreferred answer to the question "How are you?" (from the point of view of the person asking it).[14]

Taking into account indexical knowledge does not question the significant role of normative accountability in interpersonal understanding but calls attention to the dangers of applying the norms automatically.

2.6. Conclusion

Considering the above, we can agree with Boyle that a complex interpretation of the concept of preference is necessary. But all approaches are equally important, none can be left out at the expense of the others, since they all grasp the essence of preference on different levels. Boyle fails to clarify this; he accepts the validity of the various interpretations, but, regarding the structural aspect most significant, he considers the others secondary.

Preference as a structural notion provides the descriptive inference rule of the mechanism of interpretation. The psychological approach stresses the reason of the preferred/dispreferred nature of actions. Pref-

[14] Throughout Sacks's discussion in 'Everyone has to lie' (1995a, 549–66) one is reminded of how close the everyday meaning of preference comes to the technical meaning of the concept.

erence, from this aspect, is the expression of the social norm. This norm is described in the literature as interpersonality principles — principles which regulate interpersonal relations in communication and the self-projection of the communicative partners (Németh T. 2003; 2004). Such principles are the politeness principle (Leech 1983; minimize the expression of impolite beliefs, and maximize the expression of polite beliefs, all other things being equal); the principle of face saving (Goffman 1959; save your own and your partner's face in communication); politeness strategies (Brown–Levinson 1987; strategies creating and maintaining negative and positive face, where negative face is people's desire that other people do not prevent them in their actions, while positive face is people's desire that their wishes, aims, attitudes etc. would be desirable for others as well). Finally, the statistical definition of preference is an empirical generalization.

In order to fully understand the concept of preference it is necessary but, as we will see in section **3**, not sufficient to take into account the inference rule and the interpersonality principles.

3. Preference in verbal conflict

3.1. The notion of verbal conflict

Verbal conflict is a specific speech activity (Gumperz 1982, 166) or activity type (Levinson 1992) the recognition and differentiation of which is part of the pragmatic competence of all the participants and the analyst. In verbal conflict the participants take turns attacking each other's utterances, actions or selves. The misunderstanding can conclude with one party's victory (and the other party's defeat), the voluntary acceptance of the opponent's position, a compromise, a stand-off, a withdrawal, or the intervention of a dominant third party. Verbal conflicts often remain unconcluded: in such cases the participants give up the opposition and start another (speech) activity (Vuchinich 1990).

All speech activities where these characteristics can be identified (naturally, only one of the possible conclusion types can occur in each situation) belong to the category of verbal conflicts, which range from a single episode to a confrontation encompassing an entire conversation.

The critical discussion is a more strictly ordered type of verbal confrontation (see Eemeren–Grootendorst 1992, Eemeren et al. 1996).[15]

Conflict episodes are entities which comprise more than two turns and display structural properties which constrain the functions and interpretations of verbal contributions occurring in their course (Gruber 1998, 476) (see section **3.2**). One piece of discourse can contain more than one conflict episode.

The manifestation of preference organization in verbal conflicts is important and even necessary to investigate, on the one hand, because in this speech activity preference structure of the statement—agreement/disagreement sequence changes (see section **3.2**), and this makes it necessary to interpret the concept of preference in such a way that it would be adequate for this context as well. On the other hand, arriving at a carefully argued conclusion on the issue of the correlation of preference and markedness requires an investigation of the manifestations of markedness in verbal conflicts. I attempt to do so in section **3.4** below.

3.2. The preferred status of disagreement

One of the long standing theses of CA is the preference of agreement over disagreement. This thesis is the generalization of the statement made by Pomerantz (1984) in an analysis of an adjacency pair consisting of an assessment and a response. The fact that this finding became considered generally valid for conversation is most likely due to the social psychological interpretation of preference. At the same time, Pomerantz (*op.cit.*, 77–94) demonstrates that disagreement is preferred in response to self-deprecation: if it is lacking, dispreferred agreement is inferred. Elsewhere, Pomerantz (1978) states that agreement (especially in its unmitigated form) is dispreferred as a response to praise.[16]

There are clearly situations where disagreement is preferred. Accusations also operate contrary to the preference for agreement. With ref-

[15] The main parts of the critical discussion are the following: confrontation, debate opening, argumentation, and concluding decision. All of these can be characterized through the basic or complex speech acts typically realized in them, and, in addition to this, the argumentation part can also be described through the relevant argument schemata (Eemeren – Grootendorst 1992).

[16] Expressing or not expressing agreement and disagreement seems to be culturally specific (Clarke – Argyle 1982). The behaviour forms suggested by Pomerantz are valid only in European cultures and cultures similar to them.

erence to Atkinson–Drew (1979) and Heritage (1984), Garcia (1991, 821) called attention to the fact that after accusations preference for agreement would lead to an admission of guilt as the preferred response to an accusation; for accusations, however, denials are the preferred response because the absence or delay of a denial may be interpreted as an admission of/evidence of guilt.[17] Furthermore, Garcia (*op.cit.*, 828) pointed out that denials in ordinary conversation tend to be placed immediately after the accusation, without delay, accounts, or other mitigating techniques. Accusations therefore make disagreement relevant and thus provide an interactional environment for escalation into disputes and arguments.

Bilmes (1988) investigated the preference status of the second part of adjacency pairs in the first part of which A attributes some action, thought, or attitude to B in B's presence: here, following the inference rule, there is a preference for B to contradict A.

The nucleus of the verbal conflict, which can become the starting point for a single episode or a longer critical discussion, is a three-step introductory sequence (Gruber 1998, 477; Muntigl–Turnbull 1998, 227; Gruber 2001, 1822):

1. A: statement
2. B: counterstatement (i.e., disagreement with A)
3. A: counterstatement to B (i.e., disagreement with B and possibly insisting on 1)

Gruber (1998) argues that the occurrence of the third move by A is crucial for establishing a conflict episode, because if A reacts with any other action than a counterstatement to B (e.g., giving up his/her position, apologizing, or just being silent) in step 3, no conflict develops from the disagreement sequence (i.e., steps 1 and 2). The counterstatement produced in step 2 opens up the possibility of moving on to argumentation,

[17] According to Dersley–Wootton (2000, 387–8), Garcia's claim is overly general. Analysing sequences immediately following complaints and accusations, they differentiate between two types of denials, "didn't do" denials and "not at fault" denials. Denials of the "didn't do" type are characterized by features of preferred actions both in their form and their interpretation: the typical manifestation of this type of denial is not delayed, it is short and direct, and its lack (or delay) implies the admission of guilt. Denials of the "not at fault" type, which are often delayed, typically have two components: the complainee implicitly acknowledges some element of truth in the original complaint, but he or she overwhelmingly rejects any culpability for the action in question. The delay of a "not at fault" denial does not create a basis for participants to infer that the complainee accepts blame or guilt for the complained-of action.

but it is only at step 3 that it will become clear whether the conversation can continue in a new context of developing the conflict or not.

Disagreement is preferred in the speech activity type of verbal conflicts—both in longer, argumentative discourse and in shorter sequences of verbal conflict (Bilmes 1991; Kotthoff 1993; Gruber 1996; 1998). According to the rule of preference, if a statement is not followed by disagreement, the inference that is made is that the statement is agreed with (or at least accepted). If, however, open agreement is not expressed, no inference of disagreement is made.

One of the findings of the investigation of verbal conflicts is the realization that preference structure is sensitive to context: unspecific friendly conversations are performed with an orientation toward consensus and agreement is preferred. However, as soon as a counterstatement occurs following disagreement during a conversation, the context specifications change: they become conflict-oriented, which, in turn, triggers a change in the preference structure. The participants orient each other to the expectation of disagreement, and disagreement will be the preferred interpretation (Bilmes 1991, 465–6; Kotthoff 1993, 194–5; Gruber 1998, 471–6). In the case of institutional debate, the context is conflict-oriented from the start.

3.3. The data

The corpus of data consists of audio cassette recorded and transcribed conversations from one radio and two television series of debate programs. All conversations occurred in spontaneously occurring argumentative discourse in live broadcasts. The corpus contains a total of 644 turns or 17,582 words.

Discourse produced in the media has been widely investigated (Heritage 1985; Hutchby 1992; Liddicoat et al. 1994; Gruber 1996; Hutchby 1996; Gruber 1998; Bilmes 1999; Gruber 2001; Lerch 2002), sometimes with this specific goal in mind, at other times in order to avoid the difficulties of collecting conversation data containing naturally occurring conflicts.

I investigated 10 dialogues, containing a total of 401 turns or 9,724 words, from the Hungarian call-in radio program *Beszéljük meg!* 'Let's discuss it' (by György Bolgár).[18] (Below, the dialogues are referred to

[18] The length of each conversation is given in the Appendix.

with the abbreviation LDI for the name of the program and the number of the dialogue.) According to the script of this program, at the beginning of each program the host introduces 3 or 4 topical issues of public interest, and then he takes telephone calls from the listeners. Callers are invited to reflect on one or more of the given topics but can introduce new topics only with the approval of the host. The aim of the conversation, according to the script of the program, is for the caller to fully explicate his/her position. In order to aid this, the host usually takes a point of view opposite with the caller and argues for it—thus, in most cases, a verbal confrontation develops between them, although it very rarely becomes confrontational (see LDI 7). Several politeness strategies occur in the conversations (Lerch 2002). The participation of the two participants in the conversation is more or less balanced. All ten dialogues follow a similar structure: it contains a loose flow of arguments for and against possible positions on one main topic (or one main topic and a side topic, in the case of two conversations, LDI 6 and 10), framed with and interrupted by sequences and episodes not containing verbal conflict.

In *Aktuális* 'Topical' (referred to with the abbreviation TOP below), a television debate program, the presenter carries on a longer conversation in the studio with one public personality (or sometimes two) about the leading news story of the day and other topical issues. The aim in this program is also that the guests expound on their positions and defend them. I used a stretch of discourse of 122 turns, or 3,475 words, from this program in my investigation. The participants use equal amounts of time in this program as well, and the extent of the confrontation depends on the topic (and the identity of the guest). In the stretch of discourse used for the present investigation a confrontational dispute developed: its structure is more pointed than those of the radio programs, and touches on three topics, from which three episodes containing verbal conflict develop.

In the television program *Pro és kontra* 'Pros and cons' (referred to with P&C below), according to the script, a moderator leads a dispute between two parties representing two opposing positions on an issue. In the stretch of discourse used for this investigation (of 121 turns, or 4,383 words), however, the confrontation is so sharp that the moderator almost has no chance to interrupt the conversation, and, thus, the participants of the dispute carry on a dialogue most of the time. This conversation follows the normative rules of critical discussion.

Besides allowing to investigate markedness in both milder and sharper confrontations, the corpus also has the advantage of containing mostly semi-institutional conversations (LDI 1–10). Semi-institutional discourse is close to everyday conversation and is characterized by several of its features (Ilie 2001). In the discourse from the two television programs I analyse the institutional character is more dominant, but it is still not a typical example of institutional debate, especially as far as the linguistic manifestation of the confrontation is concerned. Thus, the observations made on the basis of the corpus will not be alien to everyday linguistic behaviour. The interpretation of preference would have to apply to the type of discourse investigated in this paper in any case.

3.4. Markedness

The corpus contains the following means of delay, called dispreference markers in the literature.

In turns realizing agreement, at the starts of turns speakers used hesitation, turn introducing prefaces (e.g., *hát* 'well', *nézze* 'look', *na most* 'well, now'), qualifiers (e.g., *szerintem* 'in my opinion', *én úgy gondolom* 'what I think is that...'), or a combination of these.

In turns realizing disagreement, turns also start with hesitation, prefaces, qualifiers, and also pauses, initiations of side sequences instead of disagreement (in order to delay disagreement), turn introducing agreement components, pro forma agreements, apologies, or a combination of these.

Next, in section **3.4.1**, I will bring examples to the use of each of these markers. All the examples will be illustrated in turns realizing disagreement, partly because all of the markers can occur in this utterance type (while not all do in turns realizing agreement), and partly because, due to the preferred status of disagreement in this context, their occurrence is unexpected in these utterances (if we uphold the thesis of the existence of a correlation between preference and markedness). Following the examples, I demonstrate in tables the distribution of unmarked and marked realizations of agreement vs. disagreement in the corpus (section **3.4.2**).

3.4.1. Markers in turns realizing disagreement

Abbreviations used in the identification of examples are as follows: letters (and, in some cases, numbers) before colons identify the source of the discourse (see the Appendix), letters after the colon identify the speaker(s)

(also see the Appendix), while the letter identifying the speaker is followed by numbers which refer to the number of the first turn of the example within the stretch of discourse. (For other transcription conventions, see the Appendix.)

(i) **Hesitation**. Various forms of hesitation (including self-editing) have been identified in the literature (Levinson 1983, 334) as markers of dispreference (I give such markers in boldface in the examples). Hesitation signals the reluctance of the speaker to take a stand or his/her wish to delay it, in the case of both agreement and disagreement.

(1) (TOP: GYT10)
(Topic: erecting a statue to János Kádár)

GYT: Én azt gondolom, nem olyan lehetetlen. Hát ütnünk kell persze a vasat, és még nagyon sokat kell ebben az ügyben politizálni, de megmondom, hogy (.) szóval (.) két szempontot lehet mérlegelni. Az egyik, hogy ki volt Kádár János. Szóval azért Orbán Viktor is meg az ország minden vezetője tudja, hogy a közvélemény-kutatások mit mutatnak. Azok pedig azt mutatják, hogy Kádár Jánost a magyar nép úgy élte meg és úgy emlékezik rá, mint a század legkiemelkedőbb egyéniségére.

JB: **De hát így – ezt így nem tudom** – ja hogy vannak olyan közvélemény-kutatások, amelyek (.) ö (.) hogy ha azt kérik, ez nem is vélemény, hanem hogy azt kérik, hogy kire emlékeznek hát h... hogy ez nagyon

GYT: [sokáig volt,=
[Persze!

JB: =ez nem kétséges, de hát – először is...

GYT: What I think is that it's not impossible. We have to strike the iron, yes, and have to do a lot of politics on the issue, but I tell you that (.) well (.) two aspects can be weighed. One is who János Kádár was. Well, Viktor Orbán and all the leaders of the country know what public opinion polls show. They show that János Kádár was experienced and is known to the Hungarian people as one of the most outstanding personalities of the century.

JB: **But this way – I don't know about that** – oh, you mean that there are polls that (.) er (.) that if you ask, this is not an opinion, that if you ask people who they remember well that... that this lasted a [long time,=
[Of course!

GYT:

JB: =no doubt, but – well – first of all...

(ii) **Prefaces.** Whether they introduce agreement or disagreement, a preface signals that the participant does not find the previous position completely convincing.

(2) (TOP: JB100)
(Topic: the relationship of the Workers' Party and the Hungarian Socialist Party, HSP)

JB: A (.) kongresszuson mondott beszédében Elnök Úr (.) beszélt is erről az MSZP és a Munkáspárt viszonyáról, hogy – ö – hogy (2.0) azt mondta, hogy az MSZP ne akadályozza a Munkáspártot, és hogy ne tegyenek olyan nyilatkozatokat, miszerint a Munkáspárt (2.0) öööö – a mai arculatával nem alkalmas arra, hogy együttműködjön vele az MSZP. Tehát tudja, hogy miről van szó többek között? Hát például hogy a (.) a (.) az iraki Bath-párttal kötött együttműködési megállapodás az még érvényben van? Hát ilyesmiről.

GYT: **Nézze**, nem erről van szó. Arról – arról – arról van szó, kilencvennyolcban is ez történt és azóta is ez van, az MSZP az SZDSZ-szel akar együtt menni.

JB: In (.) your speech at the congress, Mr. President, you spoke about this, the relationship of the HSP and the Workers' Party, that – er – that (2.0) you said that the HSP shouldn't hinder the Workers' Party, and they shouldn't make announcements to the effect that the Workers' Party (2.0) errr – with its current image is not suitable for the HSP to cooperate with. You know what it's all about? For instance, is the (.) the (.) the cooperation agreement signed with the Iraqi Bath Party still in effect? These kinds of things.

GYT: **Look**, that's not it at all. What – what – what it's all about is that this is what happened in ninety-eight, and this is what has been happening since, that the HSP wants to go with the AFD.[19]

(iii) **Qualifiers.** Qualifiers limit the validity of the position (of agreement or disagreement) expressed in the turn to the speaker.

(3) (P&C: IKo15)
(Topic: dividing the media.)

IKo: Nem, azt gondolom, hogy ez piacgazdaság ma Magyarországon, demokrácia van, piacgazdaság van, a tulajdon szentségét tiszteletben tartja az állam, itt egy csomó magánlap jött létre, magánemberek pénzt fektettek be egy bizonyos áruba, mert a – az újság is áru, ezt nem lehet már befolyásolni. Befolyásolni lehet a közmédiát, ott viszont elég erőteljes szerep várhat a mostani politikai szereplőkre, de szerintem egészen más szerep, mint amit a Kerényi Imréék ezen és más demonstrációkon el-

[19] AFD: Alliance of Free Democrats.

mondtak, én azt gondolom, hogy egy tisztességes, kiegyensúlyozott közszolgálati televíziót kell teremteni.

IKe: **Nem hiszek benne**, hogy ezt most meg lehet valósítani, szóval megbuktunk ezzel, Ilona. Egy olyan idegen modellt akartunk honosítani, ami ebben az országban nem honosítható...

IKo: No, I think that this is a market economy now in Hungary, we have democracy and a market economy, the sanctity of private property is respected by the state, a whole lot of private papers were established, private people invested money in a certain commodity, because newspapers are a commodity as well, this cannot be influenced any more. You can influence public media, but there you can expect for the current political personalities to have a pretty forceful role, but this role is, I think, very different from what Imre Kerényi and others were talking about in this and other demonstrations, and what I think is that a decent balanced public television should be created.

IKe: **I don't believe** in the possibility of carrying this out now, I think we failed with this, Ilona. We wanted to import a foreign model which cannot be imported into this country...

(iv) **A turn introducing agreement component (weak agreement).** It can be face saving as well as carry an important propositional meaning.

(4) (LDI10: GYB23)
(Topic: introducing a toll on a highway)

GYB: Igen, de ebből mégiscsak az a logikai következtetés vonható le, hogy aki használ valamit, aki bizonyos juttatásokhoz, örömhöz, nem tudom micsodához jut azáltal, hogy kutyát tart, vagy azáltal, hogy autót tart és autópályát használ, akkor az fizesse meg annak a költségét, nem? Tehát ne a kutyatulajdonos fizesse meg az autótulajdonos=

C: =**Ebben tökéletesen igaza van, Bolgár Úr**, de végső soron azok az utak is romlanak, amik nem az autópályához tartoznak, és ezt majd kinek kell karbantartani, ha áttevődik a forgalom?

GYB: Yes, but from this you can logically conclude that whoever uses something, whoever receives some kind of benefits, joy, whatever, from keeping a dog or from having a car and using a highway should pay for the expenses, shouldn't they? So, it shouldn't be the dog owner who pays for the car owner's=

C: =**You are perfectly right in this, Mr Bolgár**, but those roads that are not part of the highway system are damaged, too, and who will be maintaining them if the traffic will move over to them?

(v) **Pro forma agreement:** the *igen, de* 'yes, but' strategy. It serves more of a connecting function in a sharp conflict, whereas in milder disputes

the literal meaning of the phrase (agreement and face saving) plays a more important role in the interpretation.

(5) (LDI9: GYB9)
(Topic: whether the NATO ground forces will deploy in Kosovo)

GYB: Szóval hogy kiürüljön a terület, hogy aztán szabadon mozoghassanak a csapatok.
C: Pontosan, és pontosan ott, ahol a háborút lényegében a szerbek részéről is – az az egyik állásfoglalás az ő részükről, hogy olyan helyen legyen a háború, ha már elkerülhetetlen, ahol lényegében nem szerb lakosság van.
GYB: **Igen**, de mért lett volna érdeke ez a NATO-nak, hogy kiürüljön Koszovó, neki az lett volna feltételezésem szerint az érdeke, hogy bombázza a főbb célpontokat három napon keresztül, és Milosevics föltartja a kezét, azt mondja, hogy jó, egyezzünk meg így, ahogy akarjátok.

GYB: Well, so that the area is cleared of people and the troops could move around freely.
C: Exactly, and exactly where, from the point of view of the Serbs, the war is – that's their standpoint, that the war, if it's unavoidable, should be happening where the population is largely not Serbian.
GYB: GYB: **Yes**, but why would it have been in NATO's interest for Kosovo to be cleared of people, their interest would have been, I suppose, to bomb the major targets for three days, so Milosevic puts up his hands and says all right, let's come to an agreement the way you want to.

(vi) **Apology** (questioning one's competence). It can introduce agreement, too, even though I do not have an example of this in my corpus.

(6) (LDI6: GYB21)
(Topic: the war in Kosovo, and the peace process)

GYB: Talán a kormány abból indul ki, hogy mi csak egy tag vagyunk a tizenkilenc közül, ráadásul nagyon frissen fölvett, és bár valóban a mi érdekeink nagyon sokban különböznek a többi NATO-tagállamétól, de azért illúzió volna azt hinni, hogy egy magyar javaslatra reagálva majd a NATO vezető hatalmai, elsősorban az Egyesült Államok megváltoztatják a politikájukat, nem?
C: Megmondom őszintén, hogy **én nagyon keveset értek a politikához, a katonáskodáshoz pedig végképp semmit**, de úgy gondolom, hogy ebben a helyzetben minden eszközt meg kell ragadni arra, hogy Magyarországot valahogy kitereljük ebből a válságból. Nem afelé kell itt a dolgoknak haladni, hogy itt teljes jogú NATO-tagként, én nem tudom megérteni, hogy mért nem lehetett ezt megvétózni...

GYB: Maybe the government thinks that we are only one of the nineteen members, and a very new member at that, and even though our interests are really very different from those of the other NATO member states, it would be an illusion to think that in reaction to a suggestion from Hungary the leading nations of NATO, especially the United States, will change their policy, wouldn't it?

C: I'll tell you frankly, **I know very little about politics and even less about army matters**, but I think that in this situation all means should be used to stir Hungary out of this crisis. Things shouldn't be going in the direction where as a NATO member of full rights, I can't understand why it wasn't possible to veto this...

(vii) **Pause and side sequence.** I discuss these two markers together because in my corpus significant pauses affecting interpretation occur only before initiations of side sequences. The following example, thus, illustrates multiple marking (see section **3.4.2**).

(7) (LDI3: H22)
(Topic: intelligence scandal)

C: Na most – öö hát – öö – ezek után tulajdonképpen mondjuk – öö elképzelhetőnek tartom, hogy – öööö – a hírszerzés jól dolgozott, nem?
(3.0)

GYB: Hát – **nem értem az összefüggést**.

C: Öö – mert tulajdonképpen ezerkilencszázötvenhat(.)ban tulajdonképpen Horn Gyula – a-a-a – ((coughs))

GYB: Karhatalmista volt.

C: Karhatalmi

GYB: Na de ezt nem kell titkosszolgálati módszerekkel vagy nem (.) olyan módszerekkel, de egy titkosszolgálati szervezetnek földerítenie, mert hát (.) ő is elismerte.

C: Well, now – er – well – errr – after all this I can actually say – er – that I would consider it possible that – er – the intelligence did their job right, don't you think?
(3.0)

GYB: Well **I don't understand the connection**.

C: Er – because actually in (.) nineteen fifty-six Gyula Horn actually – er ((coughs))

GYB: was a member of the special police squad.

C: Police squad

GYB: But this doesn't have to be uncovered with the means of the intelligence or – not with their special means, but an intelligence organization, because well (.) he admitted this, too.

The pause and the side sequence initiated in the second turn signal the possibility of disagreement and, at the same time, delay its realization until the sixth turn. But the possibility of the realization of agreement is open until this sixth turn as well.

Having demonstrated that both preferred disagreement and dispreferred agreement can be introduced by so-called dispreference markers, in the following subsection I will discuss what the distribution is between unmarked and marked realizations of the two utterance types.

3.4.2. Markedness and statistics

In studying the realization of agreement and disagreement, I also took into consideration two other factors besides markedness: one is differentiating between the main topic vs. the side topic, and the other is the degree of the intensity of the conflict.

Both factors have been discussed in the literature, the former in connection with the study of agreement. Kotthoff (1993, 210) differentiates between partial agreement and agreement regarding the main topic of the conflict. Partial agreement concerns an unimportant aspect of the conflict or a side topic and closes the argument only as far as that is concerned, leaving the basic opposition unsolved. Agreement concerning an important aspect of the main topic brings the argument to an end, whereby the side topics lose their significance. This is rather face threatening because, if there is no compromise involved, it means that one of the parties was not able to defend his/her position. Such kind of agreement occurs in everyday conversations fairly rarely (Vuchinich 1990).

Kotthoff (*ibid.*) points out another distinction as well which can be important in investigating verbal conflicts: namely, the distinction between aggravated vs. mitigated disputes. The characteristics of aggravated disputes are as follows: a decrease of use or complete lack of delaying elements (the markers discussed above) and an increase of use of interruptions. Mitigated disputes are characterized by opposite tendencies. My corpus is balanced in this respect: about half of it contains sharp conflicts (LDI7, TOP and P&C; a total of 296 turns, or 8,818 words), while the other half (the rest of the LDI recordings; a total of 348 turns, or 8,764 words) contains mild conflicts.

The following table demonstrates the distribution of various realizations of agreement in the corpus as far as the above-mentioned aspects are concerned. (S: sharp conflict (aggravated dispute); M: mild conflict (mitigated dispute).)

Table 1

Distribution of the realizations of agreement

AGREEMENT	MAIN TOPIC		SIDE TOPIC	
	S	M	S	M
With no marker	1 (3%)	9 (26%)	9 (26%)	5 (14%)
With hesitation		1 (3%)		
With preface				2 (6%)
With qualifier			1 (3%)	
With multiple marking		4 (12%)	2 (6%)	

The corpus contains altogether 34 turns that realize agreement. In conflict-oriented discourse, as we have seen in section **3.2** above, agreement is a dispreferred response. Thus, if the markers were really markers of dispreference, marked cases should be in the majority. The data of the corpus, however, show an opposite tendency: agreement is realized without markers in 24 cases and with one or more markers in 10 cases. A tendency of unmarkedness predominates in aggravated disputes (10 unmarked and 3 marked), in mitigated disputes (14 unmarked and 7 marked), in agreement regarding the main topic (10 unmarked and 5 marked), as well as in agreement regarding the side topic (14 unmarked and 5 marked).

A tendency to avoid agreement regarding the main topic of the conflict is supported by the data for aggravated dispute but not for mitigated dispute.

The following table (Table 2) shows the distribution of the realizations of disagreement.

The corpus contains altogether 203 turns that realize disagreement. Of these, 71 are realized without markers, 132 with them. This also contradicts expectations in connection with preference status, since disagreement is preferred, and, thus, most of the cases should be unmarked. A tendency towards markedness is manifested in aggravated dispute (41 unmarked and 58 marked), mitigated dispute (30 unmarked and 74 marked), disagreement regarding the main topic (62 unmarked and 114 marked), and disagreement regarding the side topic (9 unmarked and 18 marked). This is the exact opposite of what we have seen in connection with agreement above.

Due to the limited size of the corpus it uses, this investigation aims to form (and support) hypotheses rather than test them. The results, as far as markedness is concerned, are that in conflict-oriented contexts marking works similarly to consensus-oriented contexts, i.e., agreement

Table 2

Distribution of the realizations of disagreement

DISAGREEMENT	MAIN TOPIC		SIDE TOPIC	
	S	M	S	M
With no marker	41 (20.2%)	21 (10.3%)		9 (4.5%)
With hesitation	2 (1%)			
With preface	10 (5%)	5 (2.5%)	2 (1%)	2 (1%)
With qualifier	4 (2%)	3 (1.5%)		1 (0.5%)
With turn introducing agreement component	10 (5%)	20 (10%)	1 (0.5%)	1 (0.5%)
With pro forma agreement	4 (2%)	12 (6%)	2 (1%)	1 (0.5%)
With apology			1 (0.5%)	1 (0.5%)
With insertion of side sequence	9 (4.5%)	8 (4%)	1 (0.5%)	3 (1.5%)
With multiple marking	11 (5.4%)	16 (8%)	1 (0.5%)	1 (0.5%)

tends to be unmarked, while disagreement is more likely marked. The rule of interpretation of preference, as we have seen, does not allow the supposition that agreement is preferred in verbal conflicts. Markers, then, as Bilmes (1988) also believed, do not mark dispreference in the structural sense: their occurrence is motivated by some other factor.

3.5. An attempt to explain

In this section I will attempt to answer the question of what motivation lies behind the preference of disagreement in verbal conflicts.

According to Kotthoff (1993, 209), in a fully developed dispute, concession (i.e., the acceptance, without reservations, of the opposing position of the other disputant) is a dispreferred act because it threatens the positive face of the speaker, while disagreement protects it, in the sense of Goffmann (1967) and Brown–Levinson (1987). As we have seen above, proponents of the psychological approach to preference also refer to the interpersonality principles of mutual protection of face, the politeness principle, and politeness strategies.

At this point, let us make a detour and take another look at the preference structure of adjacency pairs investigated by Bilmes (1988), where in the first pair part the speaker attributes some kind of thought or action to the co-conversant. In this kind of adjacency pair disagreement

is the preferred response while agreement is dispreferred, since a lack of utterance equals agreement and not disagreement. Let us notice, however, (and this is something Bilmes does not point out) that the thought or action attributed to the co-conversant can be of any kind—not only positive or negative but also neutral—but this does not affect the preferred status of disagreement at all. In the case of a neutral statement it is not plausible to account for the preferred status of disagreement and the dispreferred status of agreement with face work.

Bilmes (1991, 465) points out that many, perhaps most of the statements we make that could potentially be agreed or disagreed with are made without an expectation of expressions of either agreement or disagreement; in such cases it is agreement that is presumed (although not expected), and it is disagreement that is preferred (according to the inference rule of preference).

In my opinion, in the case of neutral statements, which do not directly affect the face of the participants, it is primarily the truth of the propositional content of the utterance which is at stake. This, I believe, is largely true of disputes as well: we cannot accept as the only explanation the claim that in disputes disagreement is triggered solely by the speaker's desire to defend his/her point of view (and, through it, his/her face). Equally important, or perhaps even more important, is the motivation to uncover the truth in the course of the dispute.

The main point I want to make with all of this is that in our investigations of norms and principles that explain preference, besides interpersonality principles, we should not forget about rationality principles.

Grice's Maxim of Quality (Grice 1975)—a classic rationality principle—is of crucial importance in explaining the preferred status of disagreement in adjacency pairs involving a (counter)statement in their first part. The Maxim of Relevance (Grice, *ibid.*), too, contributes to explaining the preference structure of adjacency pairs in verbal conflicts: the absence of an irrelevancy claim[20] triggers the inference that the speaker agrees with his/her partner(s) in finding the previous claim to be relevant to the discussion at hand. Further rationality principles which can be connected with preference organization are Levinson's (2000) I-Principle and Q-Principle.

In his latest book about generalized conversational implicatures and the rationality principles underlying them, Levinson (2000) does not dis-

[20] For more details, see Muntigl Turnbull (1998).

cuss preference organization, nevertheless he makes remarkable observations on the level at which systematic pragmatic inferences must be explicated[21] as well as on the manifestation of the I-Principle in a phenomenon examined by conversation analysts.

Exploring I-inferences generated by the operation of the Principle of Informativeness (the I-Principle for short), Levinson (2000, 112–5) cites the pattern of self-identifications over the telephone observed by Schegloff (see section **2.3**), where intimates expect their identity to be conveyed just by the sample of voice quality in their first *Hello*, only escalating step by step, when overt recognition is withheld, with further examples of voice quality, then nicknames or firstnames. The I-Principle (a rendition of Grice's Q2 maxim: do not make your contribution more informative than is required) is formulated as follows: "Say as little as necessary, that is, produce the minimal linguistic information sufficient to achieve your communicational ends (bearing Q in mind)"[22] (Levinson 2000, 114). Schegloff (1979) attributed the dispreferred status of overt self-identifications to social psychological motivation. In my opinion, face saving and a tendency towards economy, i.e., interpersonality and rationality principles, seem always to be at work simultaneously in the course of communication.

Levinson's First (Q-) Heuristic (Levinson 2000, 35) — "what isn't said, isn't" — is related to Grice's first Maxim of Quantity, Q1: make your contribution as informative as is required. Levinson's Q-Principle (developed from the First Heuristic) is formulated as follows: "Do not provide a statement that is informationally weaker than your knowledge of the world allows, unless providing an informationally stronger statement would contravene the I-Principle. Specifically, select the informationally strongest paradigmatic alternate that is consistent with the facts"

[21] In contrast to the standard view, according to which there are only two levels of meaning, Levinson (2000, 22–3) assumes three levels of meaning: (i) sentence-meaning, (ii) utterance-token-meaning, and (iii) a level of meaning between the first two, i.e., utterance-type-meaning. Sentence-meaning must be explicated by a theory of grammar, utterance-token-meaning (or speaker-meaning) is a matter of actual nonce inferences made in actual contexts by actual recipients. At the level of utterance-type-meaning systematic pragmatic inferences independent of particular contexts can be captured. These systematic pragmatic inferences, such as preference organization, among others, are based not on direct computations about speaker-intentions but on general expectations about how language is normally used.

[22] See the definition of Q in the next paragraph.

(Levinson 2000, 76). Considering this, Sacks's classic "dinner" example (see section **2.2**) and similar phenomena can obviously be analysed as generalized conversational implicatures induced by the Q-Principle.

According to Németh T. (2003, 248; 2004, 410), the rationality principles guide information transmission and interpretation with reference to the object. This kind of information, expressed explicitly or implicitly, is basically propositional in nature. Interpersonality principles regulate information transmission and processing on selves including the communicative partners' desires, wishes, aims, etc. This kind of information does not necessarily have a propositional form, sometimes it can hardly be propositionalized. Considering this, Gruber's (1998) investigations confirm the assumption that rationality principles are crucial in explaining preference structure in verbal conflict sequences, inasmuch as he proves that the more vehement the dispute is, the more important the propositional content and the thematic cohesion of the turns are.

We have now run a full circle. My answer to the question what we should understand by preference is, then, this: I understand preference as a phenomenon which is motivated by rationality and interpersonality principles and manifested in the norms of linguistic behaviour, and whose mechanism is described by an inference rule.

From the perspective of the above argumentation it seems plausible to interpret the linguistic means called dispreference markers in the classic works of CA and reluctance markers since Bilmes (1988) on the basis of interpersonality and rationality principles together. Without any doubt, reluctance markers play a role in protecting the face of the partner. In the case of a critical discussion—especially a sharp one—it would be strange, however, to state that any one of the markers—for instance, the agreement component as a preface of an utterance realizing disagreement—serves exclusively or even just primarily the purpose of expressing politeness and protecting the face of the partner. In such cases it is equally (if not more) important to clash positions and arguments, and the propositional content of the agreement component is also important in addition to its interpersonal effect. In the use of all the discussed markers the weighing of the propositional content of the utterance is most likely to play a role. The same is true for explanations and justifications provided in the same turn as a disagreement—these are also included among dispreference markers (although not among reluctance markers)—since an explanation or a justification used as an argument is an important element of the content of the dispute. We can suppose, then, that on the

basis of the principles of communicative language use discussed a comprehensive description of general validity can be provided about the use of these markers. An attempt at providing such a description, however, is beyond the scope of the present paper.

3.6. Statistical distribution

In the course of dispute, due to the nature of the phenomenon, preferred disagreement is most likely to be more frequent than dispreferred agreement is, since as soon as the opposite is the case, we can no longer speak of dispute. Frequency distribution agrees with preferential structure in the case of verbal conflicts. The data of the investigated corpus support this: it contains 203 turns realizing disagreement and only 34 turns realizing agreement. This, however, does not mean that the frequency distribution correlates with preferential status in the case of every sequence type.

4. Summary

In the present paper I have attempted to clarify the nature of preference considering that the use of this classical concept of conversation analysis seems to have become confused in the course of time.

After discussing the scope of preference in CA, I have first demonstrated Sacks's original concept of preference. Then, rewieving changes in the interpretation of the concept, I have studied the attempts aimed at defining it, categorizing them as structural, social psychological, statistical and complex approaches. I have argued for the complex approach, suggesting a new interpretation of preference which unifies the different views from the perspective of pragmatic principles. I have attributed the various aspects of preference to the joint manifestation of the interpersonality principles regulating the interpersonal relationships of the speakers (such as the principle of saving face, the politeness principle and politeness strategies) and rationality principles directed at the object of the utterance (such as Grice's Maxim of Quality and Maxim of Relevance, Levinson's Q-Principle and I-Principle). I have emphasized that the maxims of quality and relevance play a crucial role in understanding the preference structure of adjacency pairs involving a counterstatement in their first part.

I have investigated preference structure and markedness in a corpus of transcribed conversations from debate programs on Hungarian radio and television in order to interpret the concept of preference with regard to its context sensitivity and to arrive at a carefully argued conclusion on the issue of the correlation of preference and markedness. After discussing examples, I have demonstrated in tables the distribution of unmarked and marked realizations of agreement vs. disagreement in the corpus. The results have confirmed the assumption known in the literature but not checked in a corpus that preference does not correlate with markedness, consequently the markers investigated are not dispreference markers but reluctance markers.

Finally, I have proposed a new approach to reluctance markers to interpret them on the basis of interpersonality and rationality principles together.

Appendix

1. The data of the corpus

Discourse transcribed from audiotapes:

1. radio programs

LDI1: Let's discuss it (Beszéljük meg!) Program by György Bolgár.
26 March 1998.
31 turns, 1061 words

LDI2: Let's discuss it (Beszéljük meg!) Program by György Bolgár.
26 March 1998.
23 turns, 1032 words

LDI3: Let's discuss it (Beszéljük meg!) Program by György Bolgár.
26 March 1998.
79 turns, 973 words

LDI4: Let's discuss it (Beszéljük meg!) Program by György Bolgár.
26 March 1998.
48 turns, 779 words

LDI5: Let's discuss it (Beszéljük meg!) Program by György Bolgár.
7 April 1999.
21 turns, 719 words

LDI6: Let's discuss it (Beszéljük meg!) Program by György Bolgár. 7 April 1999.
36 turns, 1058 words
LDI7: Let's discuss it (Beszéljük meg!) Program by György Bolgár. 22 April 1999.
53 turns, 960 words
LDI8: Let's discuss it (Beszéljük meg!) Program by György Bolgár. 22 April 1999.
43 turns, 1297 words
LDI9: Let's discuss it (Beszéljük meg!) Program by György Bolgár. 22 April 1999.
27 turns, 830 words
LDI10: Let's discuss it (Beszéljük meg!) Program by György Bolgár. 22 April 1999.
40 turns, 1015 words

In all conversations: GYB: György Bolgár; C: caller

2. television programs

TOP: Topical (Aktuális). 6 July, 2001. János Betlen talking to Gyula Thürmer, President of the Workers' Party.
122 turns, 3475 words
JB: János Betlen; GYT: Gyula Thürmer
P&C: Pros and cons (Pro és kontra). Debate between Imre Kerényi and Ilona Kocsi. 5 September, 2002.
121 turns, 4383 words
IKe: Imre Kerényi; IKo: Ilona Kocsi

2. Transcription conventions

((coughs))	double parantheses: certain meaningful (mostly non-verbal) details of the scene
(.)	micropause; potentially significant but very short pause, comparable to the duration of an average syllable
(2.0)	measured pause (in seconds)
–	dash: a short unmeasured pause within an utterance
<u>lehet</u>	underline: emphasis

[nem
[persze — left-hand bracket: the point at which an ongoing utterance is joined by another

= — equal signs are used to link different parts of a single speaker's utterance when those parts constitute a continuous flow of speech that has been carried over to another line, by transcript design, to accommodate an intervening interruption when there is no interval between adjacent utterances; an equal sign also signals a lack of pause or overlap between two utterances

References

Atkinson, J. Maxwell – Paul Drew 1979. Order in court: The organization of verbal interaction in judicial settings. Humanities Press, Atlantic Highlands NJ.

Atkinson, J. Maxwell – John Heritage (eds) 1984. Structures of social action: Studies in conversation analysis. Cambridge University Press, Cambridge.

Bilmes, Jack 1988. The concept of preference in conversation analysis. In: Language in Society 17 : 161–81.

Bilmes, Jack 1991. Toward a theory of argument in conversation: The preference for disagreement. In: Frans H. van Eemeren – Rob Grootendorst – Anthony J. Blair – Charles A. Willard (eds): Proceedings of the Second International Conference on Argumentation, 462–9. SICSAT, Amsterdam.

Bilmes, Jack 1999. Questions, answers and the organization of talk in the 1992 vice presidential debate: Fundamental considerations. In: Research on Language and Social Interaction 32 : 213–43.

Boyle, Ronald 2000. Whatever happened to preference organisation? In: Journal of Pragmatics 32 : 583–604.

Brown, Penelope – Stephen C. Levinson 1987. Politeness: Some universals in language usage. Cambridge University Press, Cambridge.

Clarke, David D. – Michael Argyle 1982. Conversation sequences. In: Colin Fraser – Klaus R. Scherer (eds): Advances in the social psychology of language, 159–240. Cambridge University Press, Cambridge.

Czyzewski, Marek 1989. Garfinkel, 'cognitive revolution', and conversation analysis. In: International Journal of the Sociology of Language 78 : 43–55.

Dersley, Ian – Anthony Wootton 2000. Complaint sequences within antagonistic argument. In: Research on Language and Social Interaction 33 : 375–406.

Drew, Paul – John Heritage (eds) 1992. Talk at work: Interaction in institutional settings. Cambridge University Press, Cambridge.

Eemeren, Frans H. van – Rob Grootendorst 1992. Argumentation, communication and fallacies. Lawrence Erlbaum, Hillsdale NJ.

Eemeren, Frans H. van – Rob Grootendorst – Francisca Snoeck Henkemans 1996. Fundamentals of argumentation theory. Lawrence Erlbaum, Mahwah NJ.

Garcia, Angela 1991. Dispute resolution without disputing: How the interactional organization of mediation hearings minimizes argument. In: American Sociological Review 56 : 818–35.

Goffman, Erving 1955. On face-work: An analysis of ritual elements in social interaction. In: Psychiatry 18 : 213–31.

Goffman, Erving 1959. The presentation of self in everyday life. Doubleday Anchor, Garden City NY.

Goffmann, Erving 1967. Interaction ritual. Doubleday Anchor, Garden City NY.

Greatbatch, David 1992. On the management of disagreement between news interviewees. In: Drew – Heritage (1992, 268–301).

Grice, H. Paul 1975. Logic and conversation. In: Peter Cole – Jerry L. Morgan (eds): Syntax and semantics, vol. 3: Speech acts, 41–58. Academic Press, New York.

Gruber, Helmut 1996. Streitgespräche: Zur Pragmatik einer Diskursform. Westdeutscher Verlag, Opladen.

Gruber, Helmut 1998. Disagreeing: Sequential placement and internal structure of disagreements in conflict episodes. In: Text 18 : 467–503.

Gruber, Helmut 2001. Questions and strategic orientation in verbal conflict sequences. In: Journal of Pragmatics 33 : 1815–57.

Gumperz, John 1982. Discourse strategies. Cambridge University Press, Cambridge.

Hayashi, Takuo 1996. Politeness in conflict management: A conversation analysis of dispreferred message from a cognitive perspective. In: Journal of Pragmatics 25 : 227–55.

Heritage, John 1984. Garfinkel and ethnomethodology. Polity Press, Cambridge.

Heritage, John 1985. Analyzing news interviews: Aspects of the production of talk for an overhearing audience. In: Teun A. van Dijk (ed.): Handbook of discourse analysis, vol. 3: Discourse and dialogue, 95–117. Academic Press, New York.

Hutchby, Ian 1992. Confrontation talk: Aspects of 'interruption' in argument sequences on talk radio. In: Text 12 : 343–71.

Hutchby, Ian 1996. Confrontation talk: Arguments, asymmetries and power on talk radio. Lawrence Erlbaum, Mahwah NJ.

Ilie, Cornelia 2001. Semi-institutional discourse: The case of talk shows. In: Journal of Pragmatics 33 : 209–54.

Jacobs, Scott 1987. The management of disagreement in conversation. In: Frans H. van Eemeren – Rob Grootendorst – J. Anthony Blair – Charles A. Willard (eds): Argumentation: Across the lines of discipline. Proceedings of the conference on argumentation 1986, 229–59. Foris, Dordrecht.

Jacobs, Scott – Sally Jackson 1982. Conversational argument: A discourse analytic approach. In: J. Robert Cox – Charles A. Willard (eds): Advances in argumentation theory and research, 205–37. Southern Illinois University Press, Carbondale IL.

Jefferson, Gail 1983. On exposed and embedded correction in conversation. In: Studium Linguistik 14 : 58–68.

Kotthoff, Helga 1993. Disagreement and concession in disputes: On the context sensitivity of preference structures. In: Language in Society 22 : 193–216.

Leech, Geoffrey N. 1983. Principles of pragmatics. Longman, Harlow.

Lerch, Ágnes 2002. Normatív argumentáció, argumentációs stratégia és az udvariasság elve [Normative argumentation, argumentative strategies and the politeness principle]. In: Márta Maleczki (ed.): A mai magyar nyelv leírásának újabb módszerei V [Recent methods in the description of contemporary Hungarian 5], 421–46. Szegedi Tudományegyetem, Szeged.

Levinson, Stephen C. 1983. Pragmatics. Cambridge University Press, Cambridge.

Levinson, Stephen C. 1992. Activity types and language. In: Drew – Heritage (1992, 66–100).

Levinson, Stephen C. 2000. Presumptive meanings: The theory of generalized conversational implicature. MIT Press, Cambridge MA.

Liddicoat, Anthony – Susanne Döpke – Kristina Love – Anne Brown 1994. Presenting a point of view: Callers' contributions to talkback radio in Australia. In: Journal of Pragmatics 22 : 139–56.

Moerman, Michael 1977. The preference for self-correction in a Tai conversational corpus. In: Language 53 : 872–82.

Muntigl, Peter – William Turnbull 1998. Conversational structure and facework in arguing. In: Journal of Pragmatics 29 : 225–56.

Németh T., Enikő 2003. A kommunikatív nyelvhasználat elvei [The principles of communicative language use]. In: Általános Nyelvészeti Tanulmányok 20 : 221–54.

Németh T., Enikő 2004. The principles of communicative language use. In: Acta Linguistica Hungarica 51 : 379–418.

Owen, Marion 1983. Apologies and remedial exchanges: A study of language use in social interaction. Mouton, Berlin.

Pomerantz, Anita 1978. Compliment responses: Notes on the co-operation of multiple constraints. In: Jim N. Schenkein (ed.): Studies in the organization of conversational interaction, 79–112. Academic Press, New York.

Pomerantz, Anita 1984. Agreeing and disagreeing with assessments: Some features of preferred/dispreferred turn shapes. In: Atkinson – Heritage (1984 : 57–101).

Psathas, George (ed.) 1979. Everyday language: Studies in ethnomethodology. Irvington, New York.

Sacks, Harvey 1987. On the preferences for agreement and contiguity in sequences in conversation. In: Graham Button – John R. E. Lee (eds): Talk and social organisation, 54–69. Multilingual Matters, Clevedon.

Sacks, Harvey 1995a. Lectures on conversation. Vol. I. Blackwell, Cambridge MA & Oxford.

Sacks, Harvey 1995b. Lectures on conversation. Vol. II. Blackwell, Cambridge MA & Oxford.

Sacks, Harvey – Emanuel A. Schegloff 1979. Two preferences in the organization of reference to persons in conversation and their interaction. In: Psathas (1979, 15–21).

Schegloff, Emanuel A. 1979. Identification and recognition in telephone conversation openings. In: Psathas (1979, 23–78).

Schegloff, Emanuel A. – Gail Jefferson – Harvey Sacks 1977. The preference for self-correction in the organization of repair in conversation. In: Language 53 : 361–82.

Taylor, Talbot J. – Deborah Cameron 1987. Analysing conversation: Rules and units in the structure of talk. Pergamon Press, Oxford.

Toolan, Michael 1989. Ruling out rules in the analysis of conversation. In: Journal of Pragmatics 13 : 251–74.

Vuchinich, Samuel 1990. Sequencing of terminations in family disputes. In: Allen Grimshaw (ed.): Conflict talk: Sociolinguistic investigations of arguments in conversations, 118–38. Cambridge University Press, Cambridge.

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APOLOGY ROUTINE FORMULAE IN HUNGARIAN*

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This paper describes the forms and functions of Hungarian apology routine formulae (RF) used by Hungarian adults in a written Discourse Completion Test. Five apology RF types are identified, their choices being influenced by such factors as the offence type and its severity, the social role of the interlocutor and the offender's gender. Two main apology RF types, *Ne haragudj* 'Don't be angry' and *Elnézést* 'Excuse me' are shown to perform complementary communicative functions of restoring harmony in familiar vs. unfamiliar settings. Gender differences in the use of RF types present on various levels of analysis demonstrate that males and females choose different ways to restore social harmony and may attach importance to different aspects of the context.

1. Introduction

This study is a contribution to cross-cultural apology studies, to studies on apology and gender and to sociopragmatic research on Central European languages. While research on apologies has paid relatively little attention to apology routine formulae (RF), focusing on identifying and classifying other apology strategies, the goal of the present paper is to demonstrate that Hungarian apology RF, while bearing similarity to direct apology expressions in other languages, have language-specific forms[1] and functions, performing distinct jobs in the process of restoring harmony between the offender and the offended party, and are sensitive to such contextual parameters as the social role of the offended party in relation to the offender, the type of offensive action, its severity and the offender's gender.

In the following I will first review apology research (section **2**) focusing on the relationship between apology, politeness and culture (**2.1**), apology and gender (**2.2**) and cross-cultural apology studies (**2.3**), then in section **3** I will present the study: its participants (**3.1**), methodology

* I would like to thank two anonymous reviewers for their helpful comments on a previous draft.

[1] Hungarian *Ne haragudj* 'Don't be angry' is quite unique as an apology RF. It is also found as an apology RF in Polish (*Nie gniewaj sie*, Suszczyńska 1999) but, as Wouk (to appear) notices, in no other language that has been so far researched for apology.

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(**3.2**) and then proceed to a detailed analysis of the data from a number of perspectives (**3.3**). Finally, in section **4** I will summarize the conclusions.

2. Research in apology: a review

Within speech act theory, apology was assigned to the category of expressives the illocutionary point of which was "to express the psychological state specified in the sincerity conditions about the state of affairs specified in the propositional content" (Searle 1976, 12). Still, the approach attempting to describe apology in terms of felicity conditions did not successfully account for real life instances of apology (Owen 1983, 117–135)[2] and a more complex, functional view of apology was adopted. Under the influence of Goffman's (1971) concept of remedial work,[3] apology was viewed not merely as an expression of S's emotions but as an act that remedies an offence and restores social equilibrium and harmony. This view on apology is present in the majority of apology studies (Fraser 1981; Edmondson 1981;[4] Leech 1983;[5] Owen 1983;[6] Holmes 1989; 1990; 1995; Meier 1995[7]) although with some differences in the terminology and in

[2] Owen's (1983) attempt to apply Searlean felicity conditions to her examples of real life apologies, which in her study meant utterances that contained 'key' words or expressions such as *apologize*, *sorry* or *I'm afraid*, proved unsuccessful as not all the instances could be defined as sincere expressions of regret and the preparatory conditions became indeterminately complex and circular, being derived from the facts they were expected to account for.

[3] In Goffman's (1971, 139) words, "The function of remedial work is to change the meaning that otherwise might be given to an act, transforming what could be seen as offensive into what can be seen as acceptable."

[4] Defining apology, Edmondson (1981, 280) says: "the most predictable function of this illocution in discourse is that it counts as an attempt on the part of the speaker to cause the hearer to withdraw a preceding complaint: it is an attempt to restore social harmony."

[5] Leech (1983, 124 125) resorts to a mercantile metaphor when he argues that "an apology implies a transaction, in that it is a bid to change the balance-sheet of the relation between S and H", from interpersonal imbalance to the restoration of equilibrium, or at least the reduction of disequilibrium, between S and H.

[6] Owen (1983, 62) defines apology as a primary remedial move in a remedial exchange.

[7] Meier (1995, 388) views apology as part of repair work, which remedies damage to S's image (incurred by S's behaviour which fell below the expected standard) and in this way leads to the convergence of S's and H's worlds, which in turn restores social harmony.

the conceptualizations of the restoration process. As Norrick (1978, 280) observes, "more is at stake in [...] an act of apologizing than expressing regret; [...] apologies are made with the hope of being forgiven, or that the addressee will dismiss the matter."

2.1. Apology, politeness and culture

The politeness aspect of apology has been central to apology studies, being approached in a number of ways. Holmes (1995, 155) defines apologies as "face supportive acts" focused on redressing face-threatening behaviour and this way restoring equilibrium between S and H. Within Brown and Levinson's framework, apologies first of all function as negative politeness strategies redressing H's negative face,[8] or his/her want for non-imposition (Brown–Levinson 1987, 187). Still, there are clear instances when apology redresses H's positive face as when apologizing for introducing H to a third party using a wrong title (Holmes 1990, 162). Further, Goffman's (1971, 144) definition of apology as representing "a splitting of the self into a blameworthy part and the part that stands back and sympathizes with the blame giving, and, by implication, is worthy of being brought back into the fold" clearly suggests that apology can restore S's own social image.[9] Specifically, apologies that follow S's social gaffes are attempts to restore S's own face. Finally, in many contexts apologizing, being costly to S, may be perceived as a face-threatening act (Brown–Levinson *op.cit.*, 68) that leads to face loss not face restoration.

Another perspective on the issue of politeness is offered by Meier (1995, 387), who argues that politeness be better conceptualized in terms of appropriateness judgments within a particular speech community. She

[8] To Goffman (1967, 5–10) the term *face* means the positive social value a person claims for himself/herself, or "an image of self delineated in terms of approved social attributes", "the most personal possession [...] on loan to him from society" that is sustained through ritual and role management. In Brown and Levinson's (1987, 61) terms, face is the public self-image that every member wants to claim for himself/herself, consisting of negative face, with its claims to freedom of action and freedom from imposition, and positive face, the positive self-image that is appreciated and approved of by others.

[9] A view of apology as saving exclusively S's image when he/she behaves below the standard expected relative to a particular reference group is posited by Meier (1997, 197–8), who further states that "RW [repair work] repairs the damaged image by reaffirming shared values, thereby assuring the hearer that the speaker is a bona fide member of the group, who can be counted on to act appropriately in the future."

argues that "what should be at issue [...] is not an absolute measure of [...] politeness, but rather the social interpretation of particular linguistic behavior within a particular speech community."

A culture-specific dimension of apology comes to the fore when we consider the fact that the universality of the positive/negative concept of face, as defined by Brown and Levinson's (1987) model, has been challenged as not adequately representing speakers' communicative concerns in different cultures.[10] Many researchers studying politeness in non-Western cultures like Japan and China (Ide 1989; Ide 1998; Matsumoto 1988; 1989; Gu 1990; Mao 1994; Yu 2003) found that the concept of negative politeness with its emphasis on individual autonomy was not compatible with the collective orientation of Japanese or Chinese society. Also, culture-specific concepts of face often differed in content from the positive/negative face model (Gu 1990). Indeed, Coulmas (1981b, 89) found that "while thanks and apologies may exist as generic types of activities across cultures, it is obvious that the pragmatic considerations of their implementation are culturally defined." This means that not only does Japanese have standardized apology expressions that differ in form from those found in Western societies,[11] but that their communicative functions can only be understood when interpreted in terms of the Japanese ethics of indebtedness, a culture-specific concept that cannot be properly grasped in terms of the positive/negative face dichotomy.

Among the studies that questioned the universality of Brown and Levinson's framework and investigated politeness phenomena in their cultural context,[12] the majority of which focused on distant non-Western societies, there is little research that addresses such issues in relation to Central European languages. Wierzbicka's (1985; 1991) research on Polish and also Russian linguistic routines that reflect a cultural "ethos" of those communities is such an exception. Meier (1992, 3), in her study of Austrian German apologies, complained that "Austrian German suffers from neglect [...], being subsumed [...] under an assumed generic German language, albeit erroneously so."

[10] A detailed, critical review of politeness theories can be found in Kasper (1990).

[11] For instance, *sumimasen*, translated according to context, either as 'Thank you' or as 'I'm sorry', literally means 'this is not the end'.

[12] Attempts to reconcile the universal and culture-specific aspects of politeness have been proposed (Mao 1994; O'Driscoll 1996; Spencer-Oatey 2000b; Spencer-Oatey Jiang 2003), although have not yet been generally applied in cross-cultural or intracultural studies.

In her analysis of apologies[13] of Midwest American and Austrian German university students she found culture-specific differences in apology strategies that could not be explained in terms of positive/negative politeness. For instance, Austrians, more often than Americans, used excuses and other "avoidance oriented" strategies, which were not instances of negative politeness but, as Meier (1996b, 159) following Ringel (1991) argued, were motivated by a sense of reduced responsibility and lack of control, the feeling of personal helplessness, and the sense of inevitability, of *Schicksal* ('fate'), attitudes that developed under the Habsburg Monarchy. In my own research on Hungarian apology strategies I found a preference for self-denigration (*I'm terribly clumsy/careless*) both among Hungarian students, as compared with American and Polish students (Suszczyńska 1999), and among Hungarian adults (Suszczyńska 2003). This behaviour is similar to expressions of negative feelings among Austrians (*I hate it when I do that*) observed by Meier (1996b, 160).[14] Such similarities may not be accidental although more research is needed to properly account for these phenomena.[15]

2.2. Apology and gender

The relationship between apology and gender was most systematically researched by Holmes (1989; 1990; 1995). Using an ethnographic ap-

[13] Meier (1996a) uses the term *repair work*, which is equivalent to apology broadly understood, including apologetic illocutionary force indicating devices (IFIDs), excuses and other strategies that speakers use to remedy an offence.

[14] Meier (1992), discussing Austrian German, refers to Clyne (1984, 120), who wrote that "in many aspects, Austrians communicate in a way more similar to Czechs, Slovenians, Hungarians, and Northern Italians than to Germans (especially North Germans)."

[15] As Meier (1996b, 153) observes, making assertions regarding the value and belief system of particular societies leads to a controvertible territory. Value systems are not monolithic but dynamic and variable. In practice culture-specific concepts are explained on the basis of researchers' own knowledge of a particular culture (Obeng 1999), supported by the works of recognized philosophers (for instance, Gu's 1990, 238 reference to Confucius) or sociologists, but are also derived from interviews with community members (Bharuthram 2003) or arrived at with the help of procedures used in social psychology. Okumura and Wei (2000), who investigated apology strategies of British and Japanese women, asked the respondents to provide 20 answers to the question "Who am I?", a procedure known as the Twenty Statements Test (TST), and demonstrated that the women's strategy choices reflected important cultural differences that existed in their concepts of self.

proach, Holmes examined apologies of adult Pakeha New Zealanders and found a great number of gender differences in the distribution of apologies in her corpus. New Zealand women, for example, both produced and received the majority of recorded apologies. Further, apologies were most frequent between women, while apologies between males were rare. While males apologized more for time and property offences, females used more apologies for space and talk offences, the differences reflecting gender-specific concerns and norms in interaction. Men often regarded apologies between equals as superfluous, apologizing more to strangers than to friends and colleagues (in accordance with Brown and Levinson's claim that politeness increases together with increasing distance) and giving more weight to status difference and the seriousness of offence. On the other hand, women apologized as often to strangers as to friends (most often to their female friends), which is more in accordance with Wolfson's "bulge" model (1988), where more politeness can be found in less fixed relationships. Women also apologized more for lighter offences and regarded offences against female friends as more serious than those against strangers.

Holmes (1995, 161) also examined the overall use of apology RF in her corpus and did not find any gender differences in the overall use of RF in her corpus. Still, New Zealand males tended to use more formal RF types like *I apologize* more often that women, which might indicate that men regard apologies as signals of social distance, more appropriate with strangers than among close friends and in cases of more serious offences.

On the whole, Holmes in her study suggests that women and men may regard apologies as doing different jobs. Men consider apologies mainly as admissions of inadequacy and thus as self-oriented face-threatening acts, which, if possible, need to be avoided. On the other hand, women perceive apologizing as "other-oriented", as acts aimed at restoring and maintaining relationships, and tokens of concern or solidarity.

While Holmes's research reports considerable gender differences in the performance and conceptualizations of apology in adult Pakeha New Zealanders, studies examining apology in other languages mention only minor gender differences in the use of apology strategies (e.g., Meier 1992; 1998; Márquez Reiter 2000). Also, many cross-cultural studies (Blum-Kulka et al. 1989) did not examine gender differences at all. Further cross-cultural studies using compatible research methods and investigating males' and females' perceptions of contextual factors are needed to describe and explain the effect gender may have on the choice of apology strategies.

2.3. Cross-cultural research in apology and apology RF

A new chapter in cross-cultural, intercultural and interlanguage apology studies opened with the launching of the CCSARP (Cross Cultural Speech Act Realization Project). Following Fraser's (1981) work on apology strategies, cf. Cohen–Olshtain (1981), Olshtain–Cohen (1983) defined a "speech act set" of apology formulae, further developed by Blum-Kulka–Olshtain (1984) and adopted by CCSARP (Blum-Kulka et al. 1989, 291ff) as their coding manual.[16] The strength of the CCSARP speech act set as a universal unit of apology analysis was supported by Olshtain's (1989) findings, which revealed considerable similarity in the use of apology strategies in Hebrew, Australian English, Canadian French and German: IFID and Expression of responsibility were identified as all-purpose strategies, while Repair, Explanation and Concern were situation-specific. Olshtain also found that the same social and contextual factors and the same level of offence resulted in similar apologies in her data.[17] Trosborg (1987; 1995),[18] comparing apologies of native British English and Danish speakers elicited by means of a role play found that there were no significant differences in the use of the main apology strategies and concluded that the two nations shared similar cultures.

Examining the overall use of apology RF, Olshtain (1989, 165–8) found that, in spite of some differences, Hebrew, Australian English, Canadian French and German students tended to use apology RF in all situations to similar degrees. Also Meier (1996b), comparing apologies of American and Austrian German students, did not find statistically significant differences in RF use between the two groups except for one context of time offence where American students used RF significantly more often than Austrians, which Meier attributed to the high value placed on time in American society.

Olshtain (1989) found that RF use and its intensification correlated with social distance, status and severity of the violation. RF intensifi-

[16] The main apology strategies used in these studies are (1) Illocutionary force indicating devices (IFIDs), (2) Taking on responsibility, (3) Explanation or account, (4) Offer of repair, and (5) Promise of forbearance.

[17] Olshtain (1989, 171) adds an important caveat to her findings: the fact that very few culture-specific tendencies were found may be an artefact of the data collection instrument, a Discourse Completion Test, which contained cross-culturally similar situations, representing a student's life on a campus in a Western society.

[18] Trosborg used her own, modified version of the CCSARP manual, although compatible with the original.

cation rose with higher severity of offence, but diminished as the apologizer's status became higher. Also, Hebrew speakers tended to prefer RF with strangers and in more formal situations than with friends and acquaintances. Vollmer and Olshtain (1989), analysing German apologies, revealed that the choice of strong or weak forms of apology RF depended on the level of severity of offence and on the assumed expectation of an apology to take place. Contrary to expectations, they found that power did not correlate significantly with RF selection, although intensification of RF did. On the other hand, Meier (1997) found that in her Austrian German data RF was most frequent in asymmetrical relations.

Bergman and Kasper (1993, 95) showed that, especially for American English speakers, for some offences the relationship between the severity of offence and the use of RF was reverse, suggesting two possible explanations for this phenomenon: either S may avoid admitting responsibility or, conversely, the offender may feel that a RF is not adequate for a major offence. Trosborg (1987; 1995) evinced the same phenomenon for British English and Danish speakers and provided the very same explanation.

Regarding RF types, the CCSARP manual provided a list of cross-culturally comparable illocutionary force indicating devices (Blum-Kulka et al. 1989, 290) that were earlier grouped into three RF types in Olshtain –Cohen (1983, 22) as (a) an expression of regret (*I'm sorry*), (b) an offer of apology (*I apologize*), (c) a request for forgiveness (*Excuse me, Forgive me, Pardon me*). This three-fold division has become accepted in many subsequent studies.

On the whole, many researchers (Owen 1983; Olshtain–Cohen 1983; Rintell–Mitchell 1989; Trosborg 1987; 1995) found great uniformity in the analysed data in using an expression of regret (*sorry*) as the main apology RF. *I apologize* was very rare in spoken English; for instance, Owen (1983, 63) in her corpus of British English apologies found only two such instances. Trosborg (1995, 399) also commented that this RF type was used only a few times by her native subjects, while requests for forgiveness (*Forgive me, Excuse me,*[19] *Pardon me*) were not found at all.

Still, some studies provide enough information to conclude that in many languages more than one RF type are frequently used and that

[19] *Excuse me*, according to Borkin and Reinhart (1978), functions as a ritualistic apology formula used for breaches of etiquette (e.g., small territory invasions) and not for personal offences, being used prior to an offence, so it is not surprising that it did not appear in the elicited data. For the same reason *Excuse me* does not appear in Owen's (1983) study which also focused on apologies following an offence.

RF forms may be sensitive to contextual parameters and gender. Holmes (1995) found that both women and men used the same range of apology strategies and in similar proportion, although men tended to use formal sub-strategies (e.g., *I must apologize*) more often, which may mean, as discussed above, that they either regard apologies as signals of social distance or use them only in relatively serious offences. Hebrew examples found in Olshtain (1989) contain such RF types as 'I apologize' or 'Forgiveness', although the details of their distribution in the data are not provided.

Vollmer and Olshtain (1989), after first grouping German RF variants into eight categories according to their meaning, finally regrouped them for reasons of cross-cultural comparison into the three major groups. It turned out that an expression of regret was frequent in all contexts, while an offer of apology was not. A request for forgiveness was used in a context when the offender was of lower status and there was social distance between the participants, which suggested that this RF type made a more intense apology that the expression of regret. Still, Vollmer and Olshtain (1989) commented that the range of variation in RF was considerably narrower than they had expected.

Meier (1992; 1997), on the other hand, found that Austrians, at least when compared to Americans, showed more variety regarding RF sub-strategies. While the American participants showed a strong preference for the expression of regret, Austrians most often used two RF sub-strategies, expression of regret (*Es tut mir leid*) and exoneration request (*Entschuldigung*), without significant difference between the two. Both RF types occurred in relatively high frequencies in all the situations, displaying no constraint on their use according to type of offense, its seriousness or interlocutor relationship. Still, when Meier (1997, 201) examined variants of exoneration request, she found that the form *Entschuldigung* ('excuse') was used much more frequently than *verzeihen* ('forgive') and that the latter was used twice as often by females than by males. In Meier (1992) we also find the information that the two most common exoneration requests tended to appear in different situations. Summing up, Meier's research suggests that in Austrian German there are some gender differences in the use of RF types and that some RF types may be sensitive to contextual parameters.

My study (Suszczyńska 1999) comparing apology strategies of American, Polish and Hungarian students supported earlier findings that the expression of regret (*I'm sorry*) was a dominant apology RF type used by Americans, while at the same time revealed that Polish and Hungarian

participants displayed a much greater variety of forms and showed preference for other apology RF than the expression of regret. The findings concerning Hungarian were further supported by another study examining apology strategies of Hungarian adults (Suszczyńska 2003) where gender differences in apology RF use were observed.

The following section will further explore the use of Hungarian apology RF and its types, in a systematic way examining their overall distribution in the data, their sensitivity to contextual parameters such as the type and severity of offence and the social identity of the interlocutor and gender preferences in their choice.

3. The study

3.1. The participants

While the majority of apology studies using elicited data examined university students, I decided to examine adults. Two groups of participants, all of them practising high school teachers, took part in the study. The first group participated in a written DCT (Discourse Completion Test) questionnaire (see **3.2**) and consisted of 102 teachers (52 females and 50 males), the average age being 31.6 for the females, ranging from 22 to 52, and 36.5 for the males, ranging between 23 and 55. Half of them were the students of the upgrading program[20] offered by the Institute of English and American Studies, University of Szeged, the other half were their colleagues at work, whom they recruited to participate.[21] The tests were distributed to the group during their weekend classes in Szeged and were returned to me either personally or by mail.

After I had received responses to the DCT, I planned to conduct the test assessing the offensiveness of the examined DCT situations but unfortunately, by that time only part of the originally examined group was available and some new participants, all of them EFL teachers from the same schools, were recruited.[22] The second group consisted of 80

[20] The upgrading program is a two-year MA course for EFL teachers with a BA degree.

[21] This is an instance of snowball sampling (Seale-Filmer 1998, 139), helpful in gaining access to people who would otherwise be out of reach for the researcher.

[22] The fact that the DCT and the offence severity test were not filled by exactly the same group of participants is of importance as we cannot be sure whether

participants (41 females and 39 males), the average age for the females being 31.8, ranging from 24 to 48, and for the males 35.4, ranging from 24 to 54.

I chose the above-mentioned groups of EFL teachers mostly because of their accessibility. Besides, the groups could be said to represent "a community of practice", defined as "an aggregate of people who come together around mutual engagement, in some common endeavor" (Eckert–McConnell-Ginet 1998, 490) and who share a repertoire of verbal resources, ways of talking, beliefs and values, and are situated in similar power relations. Such relatively homogeneous groups of participants were better suited for a small-scale convenience sample study.

3.2. The data collecting instrument and procedure

As mentioned above, two types of questionnaires were used: a production DCT questionnaire[23] in an open item, free response format[24] (Kasper 2000, 327–8) to obtain the participants' written responses (see Appendix 1) and a rating-scale questionnaire (5-point rating scale), where 1 stood for 'not offensive' and 5 for 'very offensive', to elicit respondents' assessment of the severity of offence in the same contexts.

I chose a written DCT for two reasons. First, the great majority of the participants lived in different parts of Hungary and in such circumstances a written DCT that could be taken home was a convenient option. Next, I felt that this method was less intimidating for my participants than other elicitation techniques such as an oral DCT or a role-play.

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the respondents of the DCT actually perceived the seriousness of the offences in the same way as did those who filled the assessment test. Still, as both groups are EFL teachers working in the same schools, I believe that the results of the assessment test can be used for the present study.

[23] Although production questionnaires do not elicit natural responses (Beebe-Cummings 1996) and have been subject to criticism (Turnbull 2001), they enable researchers to collect large amounts of data quickly, to control contextual variables and to establish an initial set of strategies for a particular speech act. As Kasper (2000, 329) argues, "When carefully designed, production questionnaires are useful to inform about speakers' pragmalinguistic knowledge of strategies and linguistic forms by which communicative acts can be implemented, and about their sociopragmatic knowledge of the context factors under which particular strategic and linguistic choices are appropriate."

[24] In my DCT I did not use rejoinders and the participants could opt out if they felt they would rather say nothing (Bonikowska 1988).

The DCT consisted of thirty situations, twenty-four of them calling for apology and six eliciting other speech acts like an invitation or a praise,[25] which enabled the participants to produce responses other than apologies.[26] The apology situations differed in the type and severity of offence as well as in the nature of participants' relationship and were partly versions of situations found in other apology studies, and partly adapted from oral interviews with 13 participants (9 females and 4 males) who shared with me their experiences concerning apologizing and who later also participated in the written DCT. As a result, the DCT contained many situations taken from the participants' experiences at work and in relationships with their partners or spouses.

The descriptive statistics and a t-test for equality of means were carried out with the help of the SPSS (Statistical Package for the Social Sciences). In order to investigate the connection between the use of RF (and other strategies), the offence type and the S–H relationship, the situations were grouped according to offence type and H's social role in relation to S (see Appendix 2).

3.3. Data analysis

3.3.1. Apology RF and its sub-categories in the data

While in my earlier study (Suszczyńska 1999) I used the CCSARP coding categories, in my more recent research (Suszczyńska 2003) I followed Meier's model of repair work,[27] which views apologizing as a negotiation of the relationship between the offender and the offended party. In her model, apology RF are the most explicit means used to bring about the convergence between S's and H's worlds. In the present study, based on new data, I follow the same perspective on RF.

[25] Every fourth situation in the DCT was a non-apology situation.

[26] In my earlier study (Suszczyńska 2003) some participants complained that they found the DCT monotonous and having to apologize all the time made them uncomfortable.

[27] Meier (1992) groups RW strategies into three orientations according to the way in which they (attempt to) bring about convergence between S and H. The S → H orientation, where S accepts H's perspective on the offence, includes such strategies like statements of violation, self-blame and an offer of redress; the S ← H orientation, where S presents his/her version of events, includes excuses, justifications and appeal to H's understanding; finally, the S →← H orientation, where S directly aims at reconciliation and absolution, contains apology RF and appeals for the restoration of the status quo between S and H.

The apology RF is the most straightforward and explicit way used to perform apology and the most frequently used strategy in my data, the females (17.00) using it significantly more often than the males (14.46) ($p = 0.012$).

In Hungarian, apology RF is realized by five main RF sub-categories or types, glossed as *Bocsánat* ('Forgiveness-nom'), *Ne haragudj* ('Don't be angry'), *Elnézést* ('Excuse-acc'), *Sajnálom* ('I'm sorry') and *Bocs*, a casual, abbreviated form of *Bocsánat*, which I posited as a separate Hungarian apology RF in Suszczyńska (2003) due to its distinct communicative function. Although the present study focuses on the Hungarian RF sub-categories as "units" for analysis, it needs to be mentioned that each of them has a variety of extended linguistic forms, can be internally intensified, and *Bocsánat, Ne haragudj* and *Elnézést* also have T- and V-variants. *Bocsánat* ('Forgiveness-nom') and *Elnézést* ('Excuse-acc') are themselves neutral in terms of T/V-distinction, while *Bocsáss meg* ('Forgive-imp-T') and *Elnézésedet kérem* ('I ask your forgiveness-T-acc) and *Bocsásson meg* ('Forgive-imp-V') and *Elnézését kérem* ('I ask your forgiveness-V-acc) represent the T- and V-variants respectively. Regarding *Ne haragudj*, it is itself a T-form, the V-form being *Ne haragudjon.* Such forms appeared in my data although with rather low frequency.

Naturally, the above-listed apology RF could be, with some effort, grouped into the three CCSARP categories, that is, (a) an expression of regret (*Sajnálom*), (b) an offer of apology (*Bocsánat*), (c) a request for forgiveness (*Elnézést, Ne haragudj, Bocsánat, Bocs*). The expression of regret is least problematic, but an offer of apology is more so, as it requires a performative verb or expression (like *I apologize* in English or *Przepraszam* in Polish). In Hungarian the closest functional equivalent to *I apologize* is *Bocsánat*,[28] although due to its meaning it could also be classified as a request of forgiveness. Still, it is the request for forgiveness category that I find the most problematic as it puts under the same heading three or even four functionally different Hungarian RF. For these reasons I follow Owen's (1983) "key word" approach.

Table 1 summarizes the distribution of the main five apology RF types in the whole data, together with the t-test results concerning gender difference, while Figure 1 presents the same results visually.

[28] *Bocsánat* appears as equivalent to *I apologize* and *Przepraszam* in dictionaries and in private communication with my Hungarian students this equivalence was supported.

Table 1
Apology RF types in the data

ROUTINE FORMULA	SUM (N = 102)	GENDER	MEANS	SIG. (2-TAILED)
RF2 *Ne haragudj*	492.00	Male	3.6800	.001
		Female	5.9231	.001
RF3 *Elnézést*	449.00	Male	4.4400	.884
		Female	4.3654	.885
RF5 *Bocs*	260.00	Male	2.5400	.966
		Female	2.5577	.966
RF1 *Bocsánat*	230.00	Male	2.3800	.614
		Female	2.1346	.616
RF4 *Sajnálom*	159.00	Male	1.2200	.060
		Female	1.8846	.059

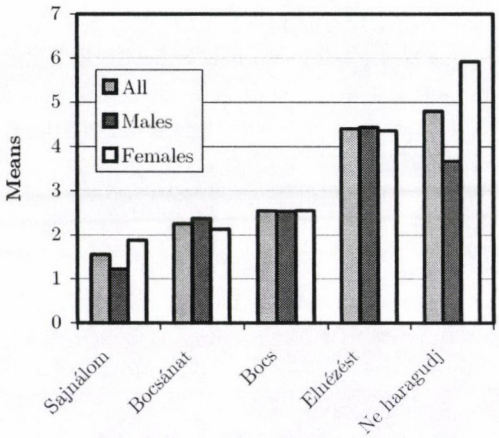


Fig. 1
Apology RF and gender

As can be seen in Table 1 and Figure 1, the distribution of apology RF types in the whole data is uneven, the most frequently used formulae being *Elnézést* and *Ne haragudj*, and the least frequently employed one being *Sajnálom*. Also, there are some interesting gender differences to be observed in the distribution of RF types in the data. First, *Ne haragudj* is used significantly more often by the females ($p = 0.012$) than by the males. *Elnézést* is used with the same frequency by both the men and the women, but for the females *Elnézést* remains only the second choice

due to their preference for *Ne haragudj*, while for the males *Elnézést* is the most frequently used RF type in the data. The second visible, although statistically not significant ($p = 0.06$) gender difference appears in the use of *Sajnálom*, the other RF type preferred by the females. As for the remaining RF types, *Bocs* is used practically with the same frequency by both genders, while the males use *Bocsánat* slightly more frequently than the females. The above-mentioned global-level differences and similarities concerning the frequencies of particular RF types and gender preferences in their distribution need to be further explored on the level of individual situations. The following section will examine RF and its types in context.

3.3.2. Apology RF in context: general observations

In order to further disambiguate the use of apology RF and its types in the Hungarian data it is necessary to have a look at the distribution of RF across the DCT situations (see Figure 2).

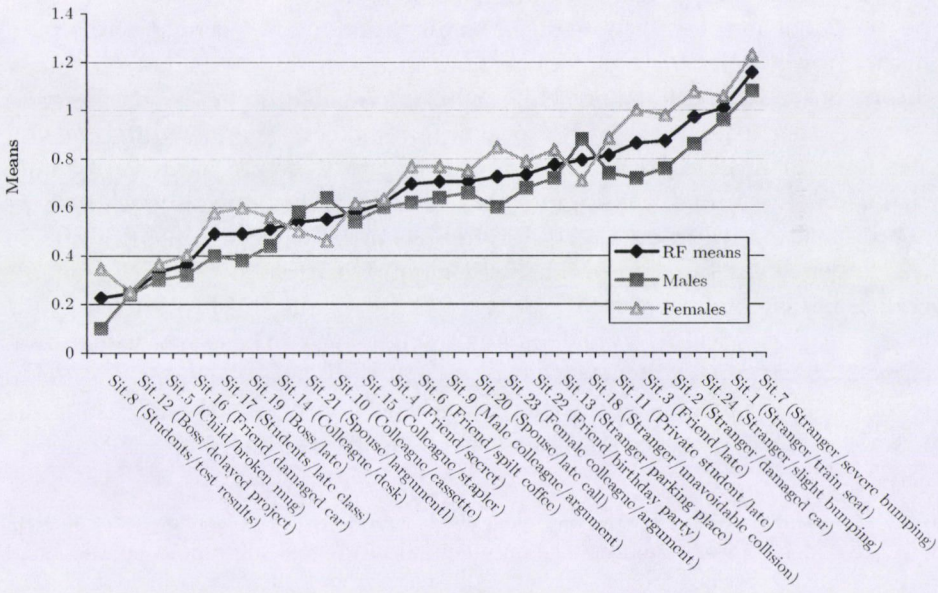


Fig. 2
Apology RF use across situations

In my data apology RF have been used in all the situations, forming an apology RF continuum, from very low to quite high RF means in indi-

vidual contexts. A closer look at the situations at the two ends of the continuum reveals a fact observed elsewhere in apology studies, namely, that many situations at the "low" end of the continuum represent much more severe offences[29] that those at the "high" end. Indeed, the relationship between severity of offence and RF means in my data appears to be quite intricate. The negative correlation between the RF means and the offensiveness means calculated with the Excel program is rather weak (−.453), still it demonstrates that there is some tendency in the data to use less RF in some of more offensive contexts. It should be added that this tendency is compensated by the positive correlation (.689) between offence size and the overall strategy use, that is, as the offensiveness grows, so does the amount of employed strategies (but other than RF).

It is also interesting to observe that among the individual RF types, *Bocsánat*, *Elnézést* and *Bocs* display weak negative correlation with offence size, that is, the participants are expected to use these RF types more readily with less serious offences. On the other hand, *Ne haragudj* and *Sajnálom* show weak positive correlation with severity of offence, which means that as the offensiveness grows, the two RF types are expected to be employed more often. This difference in correlation is in an intricate way related to gender, as *Ne haragudj* and *Sajnálom* are most often chosen by the females, while *Elnézést* is the first choice for the men.

Another aspect of the RF continuum concerns gender difference on the level of individual situations. As Figure 2 demonstrates, in many situations the females used more RF than the males but altogether there are four situations were the difference is statistically significant: Sit. 24 (Stranger/slight bumping), Sit. 8 (Students/test results), Sit. 23 (Female colleague/argument) and Sit. 19 (Boss/late), while in Sit. 17 (Students/late class) the level of significance is $p = 0.075$. All those situations indicate contexts where gender difference will be relevant on a more global level. The situations where the males used more apology RF than the females did not produce statistically significant results, Sit. 18 (Stranger/

[29] It should be noted that in my data there were hardly any gender differences in the offensiveness rankings. The only statistically significant difference was found in Sit. 2 (Stranger/damaged car), ranked as more offensive by females. The offensiveness means for all the situations were 2.99 for males and 2.96 for females. The males ranked Respect offences, and offences against spouses and students slightly higher than the females, while the females found offences against the boss as slightly more serious, although the differences were not significant. Still, while both genders agreed as to the degree of offensiveness they chose different strategies when trying to amend the wrong.

unavoidable collision) showing the biggest — although statistically not significant ($p = 0.07$) — difference where the males outdid the females. It should be added that in that particular context the males often reproached H for blocking the way so the RF itself might have a reproachful rather than conciliatory undertone.

While significant gender differences in the use of apology RF indicate contexts where there was a difference in the perception of the need to explicitly apologize for an offence, it should not be ignored that in many situations both the males and the females chose apology RF with almost the same frequency. In Sit. 12 (Boss/delayed project), Sit. 5 (Child/broken mug), Sit. 16 (Friend/damaged car), Sit. 15 (Colleague/stapler), Sit. 20 (Spouse/late call) and Sit. 1 (Stranger/train seat) there were no significant gender differences concerning the use of RF and its types, the exception being Sit. 4 (Friend/secret), where in spite of the almost identical RF means, there was significant gender difference concerning the use of *Bocsánat* and *Bocs*, the fact that will be discussed below.

3.3.2.1. Apology RF types in situations

Besides differences in the apology RF use in context, there were differences in the use of RF types in particular situations.

Bocsánat was used significantly more often by the males in Sit. 7 (Stranger/severe bumping) and in Sit. 18 (Stranger/unavoidable collision), two situations ranked low for their offensiveness and at the same time having the highest frequency of *Bocsánat* in the whole data. The males also used this RF type more often than the females in Sit. 21 (Spouse/argument) ($p = 0.08$), ranked high on the offensiveness scale, although the frequency of *Bocsánat* in this situation was much lower than in the collision situations mentioned above. On the other hand, the females used *Bocsánat* significantly more often in Sit. 17 (Students/late class), ranked as little offensive, and in Sit. 4 (Friend/secret), perceived as highly offensive, the two contexts where the males did not use *Bocsánat* at all. On the whole, *Bocsánat* was most often used, and particularly by the men, in collisions with strangers, although always as the second choice after *Elnézést*. In the remaining contexts this RF type was used much less frequently.

As for *Ne haragudj*, it was always the females who used it significantly more often than the males and in numerous contexts: in Sit. 24 (Stranger/slight bumping), where the males did not use it at all, in Sit. 7 (Stranger/severe bumping), Sit. 6 (Friend/spilt coffee), Sit. 22 (Friend/

birthday party), Sit. 11 (Private student/late), Sit. 9 (Male colleague/argument) and Sit. 23 (Female colleague/argument). Besides, the females used *Ne haragudj* more than the males in Sit. 13 (Stranger/parking place) ($p = 0.62$). All in all, *Ne haragudj* was used with high frequency, and as the first choice, in the majority of contexts involving familiar, equal status interlocutors. The participants, and in particular the males, used it definitely less frequently with students, the boss and strangers.

Elnézést is a RF type that did not display many instances of significant gender difference on the level of individual situations. Still, it was more often the males than the females who used it more. Thus, the males used significantly more *Elnézést* in Sit. 9 (Male colleague/argument) and Sit. 23 (Female colleague/argument), and also in Sit. 10 (Colleague/cassette), the difference not being significant ($p = 0.85$). On the other hand, the females used *Elnézést* significantly more often just in Sit. 8 (Students/test results). The situations where *Elnézést* was used most, and often as the participants' first choice, involve all the situations with strangers. It was used much less frequently with familiar, equal status addressees.

Interestingly, *Sajnálom* never displayed significant gender difference on the level of individual situations. The overall higher frequency of *Sajnálom* in the female responses seems to be due to the fact that the males used it in a more limited range of contexts than the females. The situation where both genders used *Sajnálom* often, the females more than the males, was Sit. 2 (Stranger/damaged car), ranked as quite offensive. Less frequently, *Sajnálom* was also used in Sit. 6 (Friend/spilt coffee), in Sit. 4 (Friend/secret), in Sit. 22 (Friend/birthday party) and in the personal Respect situations with colleagues. Neither the males nor the females used *Sajnálom* in Sit. 15 (Colleague/stapler) and Sit. 14 (Colleague/desk).

Finally, *Bocs*, used with the same frequency by both genders in the whole data, displayed significant gender differences on the level of particular situations. The males used it significantly more often in two situations where the females did not use *Bocs* at all: in Sit. 10 (Colleague/cassette) and in Sit. 4 (Friend/secret), both ranked high for offensiveness. As for the females, there were many situations where they used *Bocs* more often than the males, for instance Sit. 14 (Colleague/desk), Sit. 15 (Colleague/stapler) and Sit. 3 (Friend/late), although the difference was never significant. To sum, *Bocs* was used most often in less serious offences with familiar, equal status addressees and sometimes as the participants' first

choice. Its use in the contexts of more serious offences is more typical for the males, and can be considered as an attempt to play down the severity of the transgression.

Table 2 and Table 3 below present the division of labour between the apology RF types across the DCT situations.

Table 2

Significantly preferred apology RF types in situations

Ne haragudj	Off. size
Sit. 22 (Friend/birthday party) (F*)	3.11
Sit. 11 (Private student/late) (F*)	3.12
Sit. 5 (Child/broken mug) (F)	3.22
Sit. 9 (Male coll./argument) (F)	3.26
Sit. 23 (Fem. coll./argument) (F*)	3.32
Sit. 21 (Spouse/argument)	3.44
Sit. 10 (Colleague/cassette)	4
Sit. 4 (Friend/secret)	4.15
Sit. 16 (Friend/damaged car) (F)	4.47

Elnézést	Off. size
Sit. 24 (Stranger/slight bumping)	1.57
Sit. 1 (Stranger/train seat)	1.98
Sit. 17 (Students/late class)	2.33
Sit. 8 (Students/test results) (F*)	2.85
Sit. 13 (Stranger/park. place) (M)	3.03
Sit. 19 (Boss/late) (F)	3.38

Bocs	Off. size
Sit. 14 (Coll./desk) (F)	1.94
Sit. 3 (Friend/late) (F)	2.46

Table 2 shows all the situational contexts (17) where the participants significantly preferred one RF type over the others, the choice being mainly between *Ne haragudj* and *Elnézést*, although in a couple of situations the first choice was *Bocs*. As it was observed earlier in this section, neither *Bocsánat* nor *Sajnálom* appeared as the significantly most frequently used RF type in any of the situations. Gender-wise, Table 2 indicates that a particular RF type, being the first choice for both the males and the females, was used significantly more often by the females (F*), while (F) or (M) mean that the females or the males used a particular RF type more often than the other gender, although the difference was not statistically significant. The absence of any such indication means that both genders applied a particular routine as their first choice and with roughly the same frequency. Table 2 also contains information concerning the participants' estimations of offence size.

As can be seen, *Ne haragudj* is chosen as a significantly most preferred strategy in nine situations, all of them being interactions with familiar or close social equals, their seriousness ranging from mildly to quite serious offences. In almost all of these situations the females used *Ne haragudj* more than the males. On the other hand, *Elnézést* was significantly chosen for unequal status interactions or for interactions with

strangers, the offensiveness ranging from trivial to mildly serious. In half of these contexts there is no gender difference in the use of *Elnézést.*

Comparing the *Ne haragudj* and *Elnézést* 'lists', the situations involving students and the child need a word of commentary. Sit. 11 (Private student/late) belongs to the *Ne haragudj* group, which suggests that a private student as a recipient of apology is perceived more as a social familiar or even equal. On the other hand, while the situations involving students in class belong to the *Elnézést* group, which means that this category of students is viewed as socially more distant and unequal. The reason for this difference lies in the fact that for the examined group of teachers private students are an important source of extra income, and infractions against them can be perceived as costly. Also, teachers meet their private students, many of them adults, in their homes, so familiarity naturally develops. Sit. 5 (Child/broken mug) is also worth consideration as it belongs to the *Ne haragudj* group although the offended party is in an unequal relationship with the offender. Still, emotional closeness and affect together with the young age of the offended party downplay or reduce, at least in this context, power difference.

Finally, there are only two situations where the significantly first choice was *Bocs.* Both of them are non-serious offences against familiar addressees.

Table 3 presents those situations where the choice of a RF type was either not statistically significant, or two RF types were selected with almost the same frequency, or the males and the females differed in their preferences.

Table 3

Not significantly preferred apology RF types in situations

	OFF. SIZE	MALES	FEMALES
Sit. 18 (Stranger/unavoidable collision)	1.95	*Elnézést/Bocsánat*	*Elnézést*
Sit. 15 (Colleague/stapler)	2.14	*Ne haragudj/Bocs*	*Ne haragudj/Bocs*
Sit. 7 (Stranger/severe bumping)	2.44	*Bocsánat/Elnézést*	*Elnézést*
Sit. 20 (Spouse/late call)	2.62	*Bocs/Ne haragudj*	*Bocs/Ne haragudj*
Sit. 6 (Friend/spilt coffee)	2.78	*Elnézést/Bocsánat*	*Ne haragudj*
Sit. 2 (Stranger/damaged car)	3.77	*Elnézést/Sajnálom*	*Sajnálom*
Sit. 12 (Boss/delayed project)	4.08	*Ne haragudj*	*Elnézést/Sajnálom*

The RF choices presented in Table 3 provide some support for the previous findings summed up in Table 2. The choice of *Elnézést* in Sit. 18 (Stranger/unavoidable collision), Sit. 7 (Stranger/severe bumping) and Sit. 2 (Stranger/damaged car) corresponds to similar uses of this RF

type presented in Table 2. Also, Sit. 15 (Colleague/stapler) and Sit. 20 (Spouse/late call) representing offences of medium severity committed against socially familiar addressees are good candidates for either *Bocs* or *Ne haragudj*. The presence of *Sajnálom* in Sit. 2 (Stranger/damaged car) and in Sit. 12 (Boss/delayed project), used more by the women, suggests that this RF type fits quite severe transgressions against addressees who are distant either in terms of familiarity or in terms of status and where not much can be done in terms of remedy. *Bocsánat*, used more readily by the males, appears to be an alternative to *Elnézést* in space collisions. The two situations where the male and female reactions clearly differ are Sit. 6 (Friend/spilt coffee) and Sit. 12 (Boss/delayed project). The females perceive this situation as belonging to the *Ne haragudj* group, that is, as an offence against a socially close interlocutor, while the males seem to focus more on the offence itself, and probably on their own failure. The choice of *Ne haragudj* by the males in Sit. 12 (Boss/delayed project) is surprising considering the fact that in Sit. 19 (Boss/late) both genders used mainly *Elnézést*. The number of RF instances in this situation is very low, so any generalizations are difficult to make. Still, while *Elnézést* in this context recognizes status difference between the interlocutors, *Ne haragudj* may be an attempt to reduce the distance and this way facilitate the restoration process. Further investigation of the participants' motives would be necessary to make more substantial claims.

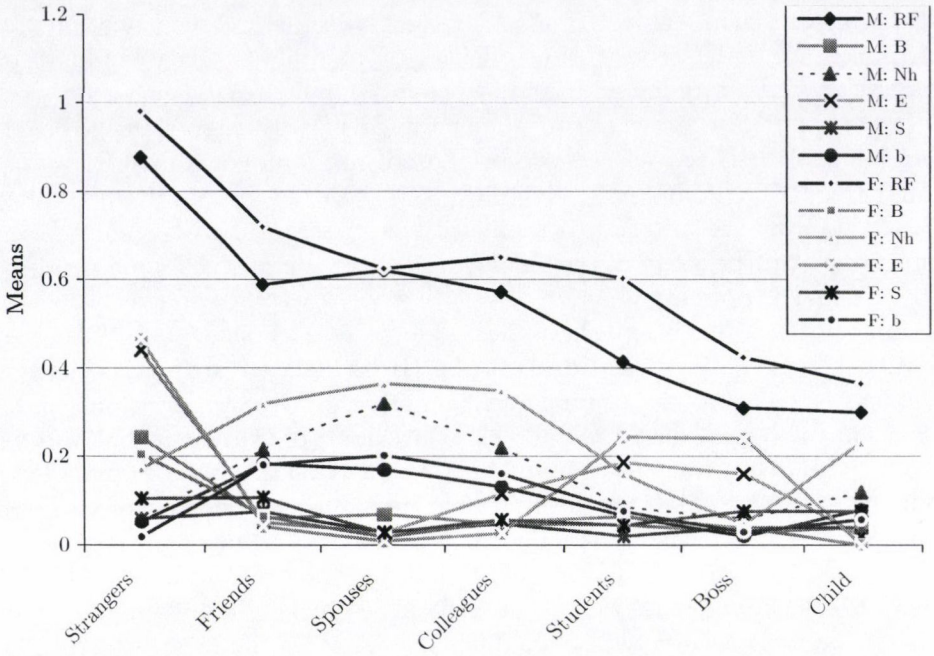
As the final level of analysis, I will examine the use of all RF and its sub-categories in the data, grouping the situations according to the social role of the offended party and according to offence type, as can be seen in Figure 3 and Figure 4 below.

3.3.2.2. Apology RF in context: H's social role

Figure 3 (overleaf) demonstrates a number of important and not accidental regularities (see also Table 4).

Both the males and the females use apology RF most frequently with strangers, the females using it more often than the males ($p = 0.074$). The high RF means with strangers are partly due to the fact that three stranger situations involve bodily collisions that are most easily manageable with a mere RF, although other situations with strangers (Space and Property offences) also evince more explicit RF use than situations with more familiar interlocutors.

Friends received significantly more RF from the females than from the males ($p = 0.022$) and the same is true about students ($p = 0.003$). On



M – males, F – females; B – *Bocsánat*, Nh – *Ne haragudj*, E – *Elnézést*, S – *Sajnálom*, b – *Bocs*

Fig. 3

Apology RF types and H's social role

the other hand, both genders had the same RF means when apologizing to their spouses, displaying a kind of convergence in a relationship that is at the same time most intimate and at least theoretically equal. Finally, the females used more RF with the colleagues and the boss, although the difference was not statistically significant.

The low RF means with the boss look intriguing, especially that both Sit. 19 (Boss/late) and Sit. 12 (Boss/delayed project) were assessed as quite offensive. The answer may partly lie in the fact that apology RF are often found as not adequate for major failures. Also, both situations were instances of emergency, where immediate remedy was required rather than a performance of verbal routines. But then, perhaps, the participants found apologizing in these contexts rather costly and decided not to denigrate themselves in front of their superior.[30] The participants'

[30] The participants revealed to me that their relationship with their boss was often informal and friendly and they were more like colleagues. Still, friendliness and informality do not seem to be salient in the two analysed contexts.

Table 4

Distribution of apology RF types according to H's social role

MALES	OFF. SIZE	RF	B	Nh	E	S	b
Strangers	2.456	0.877	0.243	0.06	0.440	0.060	0.053
Friends	3.395	0.588	0.06	0.216	0.052	0.076	0.184
Spouses	3.032	0.62	0.07	0.32	0.03	0.03	0.17
Colleagues	2.930	0.572	0.048	0.22	0.116	0.048	0.132
Students	2.766	0.413	0.047	0.087	0.187	0.020	0.067
Boss	3.728	0.31	0.03	0.06	0.16	0.04	0.02
Child	3.215	0.3	0.04	0.12	0.02	0.04	0.08
FEMALES	OFF. SIZE	RF	B	Nh	E	S	b
Strangers	2.456	0.981	0.205	0.173	0.465	0.106	0.019
Friends	3.395	0.719	0.065	0.319	0.042	0.108	0.181
Spouses	3.032	0.625	0.0192	0.365	0.0096	0.029	0.202
Colleagues	2.930	0.65	0.054	0.35	0.027	0.058	0.162
Students	2.766	0.603	0.064	0.160	0.244	0.045	0.077
Boss	3.728	0.423	0.038	0.048	0.240	0.077	0.030
Child	3.215	0.3654	0	0.2308	0	0.0769	0.0577

own reflections and comments would be a good source of information in that matter.

Both genders used apology RF least frequently with their own child, the qualification being that there was altogether one child situation in the DCT. Still, if we compare Sit. 5 (Child/broken mug) with Sit. 2 (Stranger/damaged car) and Sit. 6 (Friend/spilt coffee), all of them property offences, it turns out that RF means in the child situation are much lower than in the other two contexts.

To summarize, the females used more apology RF than the males to all their interlocutors except their spouses. Also, the males clearly differentiated in the use of RF between their social equals like friends, spouses and colleagues and social minors, i.e., their students, while the females used RF as frequently with their students as with their colleagues, although with an important difference concerning the RF type.

On the level of the RF types, Figure 3 shows a number of important tendencies. First, two dominating RF types are *Ne haragudj* and *Elnézést* and their distribution across interlocutors' categories appears to be complementary: whenever *Ne haragudj* use goes up, *Elnézést* goes down and vice versa.

Both genders used *Ne haragudj* most often when apologizing to interlocutors who are socially equal and close, that is, to friends, spouses and colleagues. The females used *Ne haragudj* to the three groups of interlocutors with almost the same frequency, while the men used it most often with spouses. Also, the females used this RF type more often than men with distant interlocutors, i.e., strangers and with social minors, the students and the child. It is worth noticing that both the males and the females hardly used *Ne haragudj* with their boss. On the whole, the women used *Ne haragudj* more frequently than the men and more often to all types of interlocutors except the boss.

As for *Elnézést*, it was a RF type used most often with strangers, with no gender difference regarding frequency. Both the men and the women also used *Elnézést* with socially unequal interlocutors, the students and the boss, in both contexts the females using more *Elnézést* than the males. On the other hand, the males used this apology RF type with colleagues, while the females hardly did. The females never used *Elnézést* with the child, and as for the males, there was just one instance of this RF type used in this context.

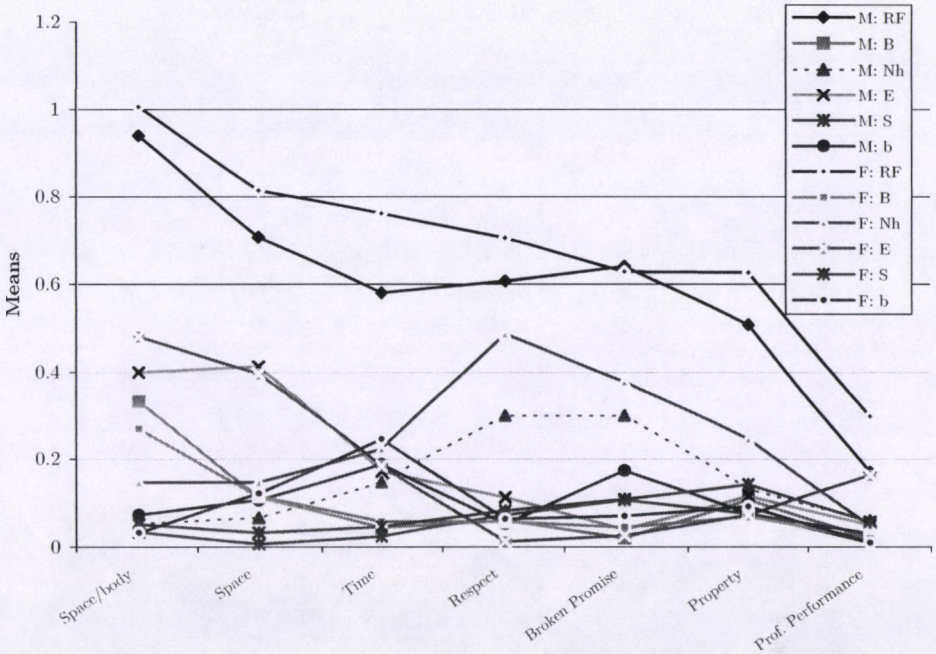
Bocs appears as a RF used mostly with socially close equals: friends, spouses and colleagues, the women using it slightly more with colleagues and spouses. Both the men and the women hardly used *Bocs* with strangers, although the men used it more often than the women in that context. The *Bocs* curve is similar to that of *Ne haragudj*. Still, *Bocs*, as observed earlier, seems to assume not only friendly relationship but also that the offence is not serious, so its occurrence is necessarily limited.

Bocsánat is a RF used most often with strangers, the men using it slightly more often than the women. There are very few instances of this RF type used with the other types of interlocutors, although the men used it more than the women with their spouses. Also, the women never used *Bocsánat* with their child.

Sajnálom, more frequent in the female responses, was used with low frequency with all types of interlocutors. The females used it slightly more often than the men with all the interlocutors except their spouse, where both the men and the women used it with the same low frequency.

3.3.2.3. Apology RF in context: offence type

Figure 4 presents the distribution of apology RF and its types according to the type of offence (see also Table 5).



M – males, F – females; B – *Bocsánat*, Nh – *Ne haragudj*, E – *Elnézést*, S – *Sajnálom*, b – *Bocs*

Fig. 4

Apology RF types and offence type

As can be seen, the RF is most frequently used in the Space/body offences, being the most efficient strategy to remedy such unintentional bodily collisions. The Space offences, which just like the Space/body transgressions were assessed as only mildly offensive, come second in RF use. Although in both contexts the females used more RF than the males, the difference is small and not significant statistically.

On the other hand, in the Time offences the gender difference was significant, the females using RF more often than the males in all the time situations, especially when apologizing to students, to the friend and to the boss. This finding is interesting in the light of Holmes's research where it was males who apologized more for Time transgressions, which, as Holmes (1995, 185) observed, may suggest that men have different priorities than women.[31] Still, it should be remembered that Holmes worked

[31] Holmes (1995, 168) suggested that it may be the case that males more than females perceive time as a very valuable commodity.

Table 5

Distribution of apology RF types according to offence type

MALES	OFF. SIZE	RF	B	Nh	E	S	b
Space/body	1.987	0.94	0.33	0.053	0.4	0.033	0.0733
Space	2.312	0.707	0.113	0.067	0.413	0.007	0.107
Time	2.781	0.58	0.044	0.148	0.172	0.024	0.188
Respect	3.340	0.607	0.06	0.3	0.113	0.073	0.053
Broken promise	3.755	0.64	0.02	0.3	0.04	0.107	0.173
Property	3.276	0.508	0.108	0.132	0.116	0.076	0.076
Prof. performance	3.462	0.17	0.02	0.06	0.05	0.03	0.01
FEMALES	OFF. SIZE	RF	B	Nh	E	S	b
Space/body	1.987	1.006	0.269	0.147	0.481	0.051	0.032
Space	2.312	0.814	0.115	0.147	0.397	0.032	0.122
Time	2.781	0.762	0.058	0.223	0.185	0.046	0.246
Respect	3.340	0.705	0.058	0.487	0.013	0.083	0.064
Broken promise	3.755	0.628	0.045	0.378	0.026	0.109	0.071
Property	3.276	0.627	0.069	0.246	0.073	0.142	0.092
Prof. performance	3.462	0.298	0.019	0.048	0.163	0.058	0.010

with a different type of data and analysed whole apology responses (with or without RF).

The females also used more RF in the personal Respect offences, especially with their female colleague, although the difference was not statistically significant. As for the Broken promise offences, this offence category consists of situations that, compared to Time or Space offences, are less homogeneous in terms of offence type and also vary in their offensiveness. On the whole, both the men and the women used RF with the same frequency in this context, although the males apologized more for forgetting to bring the cassette, while the females for not going to the birthday party.

There is a significant gender difference in the Property offences, the females using more RF than the men in all property situations. Again, Holmes's research produced opposite results, which Holmes (1995, 170) found consistent with a popular belief that men value things more than women. Whether the Hungarian findings mean that the females find things more values than the males is a matter for further investigation.

Finally, the Professional performance failures have lowest RF means, the females using more RF than the males, although not significantly.

This type of offence or failure is definitely face-threatening for the offender and this may be a reason for low RF frequency.

On the level of apology RF types, it is interesting to observe that certain offence types show preference for certain apology routines. Thus, *Elnézést*, with no gender difference, was the most preferred RF type in the Space offences and was also the first choice, especially for the females, in the Space/body failures. The females also used *Elnézést* more often than the males in the Professional performance failures, while the males, unlike the females, used it in the Respect offences. *Ne haragudj* was the most often used RF type in the personal Respect and the Broken promise offences, the females using it in these contexts definitely more often than the males. The females also favoured *Ne haragudj* in the Property offences. On the other hand, there was no preferred RF type in the Time offences, three different RF types clustering at the same frequency level. The Professional failure and Property infractions showed the same phenomenon in the case of the male participants.

Here also, just like in Figure 3, *Ne haragudj* and *Elnézést* show opposite tendencies in many contexts: high frequency of *Ne haragudj* goes together with low frequency of *Elnézést.*

As for the remaining apology RF types, *Bocsánat* can be found relatively frequently only in the Space/body offences, the males using it slightly more often than the females, the remaining offence contexts showing low occurrence of this RF type. *Bocs* appears most frequently in the Time offences, where the females used it more often than the males, and in the Broken promise offences, where the males used it more than twice as often as the females. Finally, *Sajnálom* is most often used in the Broken promise offences and then, by the females, in the Property offences, although the frequency of occurrence of this RF type in all the contexts is low.

Concerning the relationship between the apology RF types and offence size, Tables 4 and 5 show that the contexts assessed as least offensive, i.e., the offences against strangers and the Space/body and Space transgressions show strong preference for *Elnézést.* On the other hand, the most serious offences are less predictable on the basis of mere offensiveness ranking. The transgressions against the boss take *Elnézést*, the Broken promise offences show preference for *Ne haragudj*, while in the Professional performance failures the females most often use *Elnézést*, the men, however, do not have a favourite RF type. Clearly, the choice of a particular RF is motivated simultaneously by a number of different factors, some of which have not been considered in the present study.

3.3.3. Apology RF types: what they convey

In this section I will look at the findings of the present study in the light of native speakers' own understandings of what the Hungarian RF convey in interaction when used after an offence took place. It is important to mention that what was described were the particular apology forms and not types. Thus, the description of *Ne haragudj* referred to its most often used T-form and not to the V-form, *Ne haragudjon.* Those understandings were collected during an informal discussion in class with my university students and cannot be taken as complete and exhaustive descriptions. Still, they may provide some basis for interpreting the results and may help define the different 'jobs' Hungarian RF types perform in interaction.

As for *Ne haragudj*, my students characterized it as personal and 'other-oriented', conveying such emotions like remorse, a hope to be forgiven, considerateness for the offended party's feelings and for the relationship itself, and as appropriate to use with friends and close acquaintances, especially in personal offences. My students also agreed that what *Ne haragudj* most centrally conveys, when contrasted with the other RF types, is that the offender wants the offended party to know it is important for him/her, that the offended party think of him/her as a friend again, that their good relationship be restored. As *Ne haragudj* was most often used in contexts where the relationship between the parties was close prior to the offence, the data supported the students' insights. The fact that the women used *Ne haragudj* more often than the men supports Holmes's claim that when apologizing women are more relationship and solidarity oriented than men.

Elnézést was described as formal, reserved and implying V-form usage between the parties, appropriate to use with strangers and higher status addressees. My students made it clear that using *Elnézést* does not convey interpersonal closeness or friendly feelings and may sound distancing when used in close relationships or in personal offences. The distribution of *Elnézést* in the data seemed to fit the description as *Elnézést* was most often used to restore relationships that were socially distant and characterized by status difference. Thus, it seems that what *Elnézést* mostly conveys is that the offender recognizes the transgression and wants to amend the breach but does it from a distance, without personal involvement.

The above specifications throw some light on the gender differences observed in the use of *Elnézést.* Thus, while the females approached col-

leagues the same way as friends, using *Ne haragudj* and almost never *Elnézést*, the males used more *Elnézést* with colleagues in all types of infractions, and especially in the personal Respect offences. Such a difference may suggest that the males did not consider colleagues as very close interlocutors or that they used *Elnézést* as a distancing device. As for the females, their more frequent use of *Elnézést*, when apologizing to the boss, especially in the delayed project context, and with students in class, in particular in the test results situation, suggests that the females may be more sensitive to status difference in interaction and more concerned about their professional performance.

As for *Bocs*, my students characterized it as very informal and familiar, assuming the T-form usage and equal status between the parties, appropriate to use by young people, between familiar social equals and for small offences. They also confirmed that this RF type may sound playful, unserious, or even inconsiderate if used in the wrong context. My data supported part of the specification as *Bocs* was used mostly to friends, spouses and colleagues, and hardly ever to strangers or to social un-equals. Still, as regards severity of offence, the male participants more often than the females used *Bocs* in the Broken promise offences, ranked as serious. In the cassette situation the males used it significantly more often than the females, and in the secret situation the females did not use *Bocs* at all. Using *Bocs* in these contexts seems to imply that either the offender did not consider the offence as serious because it happened between good friends, or that he chose *Bocs* in its 'playful' function to lighten up the atmosphere or that he was inconsiderate towards the addressee. A further analysis of individual responses and the participants' commentaries would be necessary to decide which was the case.

Sajnálom also received competing characterizations. On the one hand, it was described as expressing genuine sorrow, conveying S's non-intentionality and empathy towards H, and as appropriate to use in contexts where little could be done to restore the damage. The contexts where *Sajnálom* was most probably used this way were the damaged car and the spilt coffee situations, in both contexts the females using it more often than the males. The female tendency to use *Sajnálom* more frequently in many other contexts may suggest they were more prone to view offences as irreversible. On the other hand, *Sajnálom* was characterized as superficial, expressing indifference and lack of considerateness for the offended party. Although this aspect of *Sajnálom* has not been investigated in my analysis, some instances of *Sajnálom* in the secret and personal Respect situations suggest it was used with such an intention.

Finally, *Bocsánat* was characterized as a strong and unambiguous apology, polite but formal, impersonal and official, and not necessarily sincere. In my data this RF type was mostly used with strangers in Space/body offences, where, indeed, what was required was a straightforward, unambiguous strategy that would efficiently repair the breach. Also, in this context the males used it more often than the females. *Bocsánat*, with significant gender differences, was also used in other contexts involving familiar interlocutors and serious offences. Still, it seems that the factors influencing those choices were more complex and at that stage are difficult to disambiguate.

4. Concluding remarks

The analysis of Hungarian RF and its types in context has demonstrated that the apology RF choices in the data were influenced by such contextual factors as the offence type and its seriousness, the social role of the interlocutor and the offender's gender. It has been further established that two dominating RF types were *Ne haragudj* and *Elnézést*, the remaining apology routines being used less frequently. The distribution of *Ne haragudj* and *Elnézést* as well as the remaining RF types across the examined contexts suggested that they performed distinct communicative jobs in the process of restoring social harmony. *Ne haragudj* was mostly used to remedy infractions with social equals and indicated involvement with the offended party, while *Elnézést* was employed to restore breaches with strangers and in unequal encounters and indicated distance between interactional partners.

The analysis of gender differences in the choices of apology RF revealed similarities in the overall tendencies in RF use in context although a number of statistically significant differences in RF choices suggested that the males and females had distinct interpretations and orientations to contextual factors. The females used more RF than the males, which suggested that in the same set of contexts they felt a greater need to apologize than the males. The differences in the choices of apology RF types, in particular more frequent use of *Ne haragudj* by the females and gender differences in the use of *Elnézést*, further suggested that the women were more other- and solidarity oriented, more sensitive to status difference and more concerned about their professional performance. On the other hand, in certain contexts the males more often used RF types to imply distance or downplay the severity of offence.

The politeness aspect of Hungarian apology RF types posits questions in need of investigation. Within Brown and Levinson's (1987) model of positive and negative politeness, *Ne haragudj* and *Bocs* could be classified as the former, *Elnézést*, *Bocsánat* and *Sajnálom* as the latter, although such a superficial division would conceal the culture-specific distinctions in conveyed meanings. Also, both the data and the native speakers' insights suggest that there are subtle differences in politeness between Hungarian apology RF that need to be disambiguated. Further research, investigating such questions like the (degrees of) appropriateness of particular apology RF types in different contexts, as perceived by males and females, and the reasons underlying such perceptions, would help reveal the underlying cultural assumptions informing apology behaviour (cf. Meier 1998, 215).

The present study has a number of limitations that have their import on its findings. The scope of the analysis was limited to apology RF alone, analysed in isolation, independently of other apology strategies that accompanied RF and may have influenced the way they functioned. The results were also influenced by the data collection instrument, which imposed certain contexts on the participants, although there was a choice to opt out. Supplementing the present study with naturally occurring conversational data would be the necessary next step to take.

Appendix 1: Apology situations[32]

Sit. 1 (Stranger/train seat)
A vonaton véletlenül nem a jegy által megadott helyet foglalja el. Nemsokára fölbukkan az igazi tulajdonos, mire Ön megnézi a jegyét, és rájön, hogy rossz helyen ül.

[32] Some of the situations below were taken from other apology studies. Sit. 4 (Friend/secret) and Sit. 13 (Stranger/parking place) come from Meier (1992), Sit. 2 (Stranger/damaged car) is found in Cohen–Olshtain (1981) and in Blum-Kulka et al. (1989), Sit. 7 (Stranger/severe bumping), Sit. 8 (Students/test results), Sit. 24 (Stranger/slight bumping) were used by Cohen Olshtain (1981), while Sit. 16 (Friend/damaged car) appears in Bergman Kasper (1993). Also, a situation describing personal conflict at work, represented by Sit. 9 (Male colleague/argument) and Sit. 23 (Female colleague/argument) in my DCT, appears in Blum-Kulka et al. (1989), Cohen Olshtain (1981) and Bergman – Kasper (1993). Time offences and small property offences (like spilling food) are also found in the above-mentioned sources.

[You accidentally occupy someone else's seat on a train. Soon a passenger comes to claim his/her seat and then you realize your mistake.]

Sit. 2 (Stranger/damaged car)
Megállt parkolni. Ahogy tolatott kifelé, véletlenül nekimegy egy másik jó márkájú autónak, amelyik ezáltal megkarcolódik, és behorpad az ütközője. A tulajdonos kiszáll, és elég idegesnek látszik, majd Ön is kiszáll, és odamegy hozzá.
[When you are backing out of a parking place, you run into another, quite expensive car, scratching the side and denting the bumper. The driver gets out and looks quite angry. You also get out and walk towards him/her.]

Sit. 3 (Friend/late)
Egy közeli barátjával megbeszéltek egy találkozót, hogy egyszerűen csak leüljenek beszélgetni. Ön késve érkezik. Mire belép a kávézóba, a barátja már egy félig üres pohár üdítő mellett ül egy asztalnál.
[You are late for a get-together with a friend at a coffee house. When you arrive, your friend is sitting over a half-empty glass of a soft drink.]

Sit. 4 (Friend/secret)
Egy közeli barátja elárulja Önnek, hogy válni készül, és már kialakulóban van egy új kapcsolata. Arra kéri Önt, hogy senkinek se árulja el a dolgot, mert még egyelőre titok. Mégis, egy másik alkalommal, mikor egy közös ismerősükkel beszélget, kicsúszik a száján a hír. Ön nemsokára megtudja, hogy a barátja már tudomást szerzett arról, hogy Ön nem tartotta meg a szavát. Pár nappal később összefutnak egy közös ismerősnél, és a barátja elég szemrehányóan néz Önre.
[A close friend of yours tells you he/she is going to get divorced and has already been seeing someone else but asks you to keep the news secret. Still, when you are talking to a mutual friend the news slips out of your mouth and the close friend soon learns you blabbed his/her secret out. A few days later, when you already know that your close friend has been informed about your indiscreetness, you run across him/her at someone else's place and he/she gives you a very reproachful look.

Sit. 5 (Child/broken mug)
Egyik nap Ön véletlenül eltöri a gyermeke kedvenc bögréjét. Ahogy szedi össze az eltört darabkákat, a gyermeke éppen belép a konyhába, és meglátja, mi történt.
[One day you accidentally break your child's favourite mug. The child just enters the kitchen and sees what has happened.

Sit. 6 (Friend/spilt coffee)
Egyik nap vendégségbe megy ismerőseihez. Leülnek kávézni, és egy óvatlan pillanatban Ön kiönti kávéját a tiszta asztalterítőre.

[You are visiting your friends. You are having coffee together when you suddenly spill the contents of your cup over a clean tablecloth.]

Sit. 7 (Stranger/severe bumping)
Egy áruházban nekimegy egy másik vevőnek úgy, hogy az megtántorodik.
[You so much bump into another customer at a department store that he/she staggers.]

Sit. 8 (Students/test results)
Ön a múlt órán dolgozatot íratott az osztállyal. Amikor ma kiosztotta a kijavított teszteket, panaszkodva, hogy az eredmények nem túl jók, a diákok hamar jelezték, hogy lehet, hogy hiba van a javításban. Ön megnézte, és látta, hogy bizony igazuk van.
[Last week your students wrote a test. Now you distribute the corrected papers, complaining about poor results, when some of the students tell you there are mistakes in your corrections. You have a look at the tests again and realize they are right.]

Sit. 9 (Male colleague/argument)
A tanáriban kialakult egy vita és Ön felemelt hangon beszélt egy férfi kollégájával. Most már lecsillapodott, a kollégának viszont úgy látszik rosszul esett az egész.
[There is a heated discussion in the teachers' room and you raise your voice when arguing with a male colleague. Now the discussion is over and emotions are down but the male colleague looks offended.]

Sit. 10 (Colleague/cassette)
Egy kolléga kölcsönadott Önnek egy kazettát (vagy egy másik tananyagot) amit mára sürgősen visszakért, mert a mai órája erre az anyagra épül. Amikor a kolléga közeledik Önhöz, Ön rájön, hogy otthon felejtette.
[Your colleague lent you a cassette (or some other teaching material) and asked you to bring it back today because he/she absolutely needed it for his/her class. When you meet the colleague in the teachers' room you realize you have forgotten to bring the cassette.]

Sit. 11 (Private student/late)
Ön elkésett a magánórájáról. Amikor végre sikerül hazaérnie, a tanítvány már az ajtó előtt várakozik.
[You arrive late for your private English lesson at home. The private student is waiting in front of your front door.]

Sit. 12 (Boss/delayed project)
Az igazgató(nő) megkérte Önt, hogy készítsen egy évzáró programtervet, vagy annak egy részét, és röviden mutassa be a megbeszélésen. A terv sajnos még nincs kész. A megbeszélés előtt Ön beszélni szeretne erről az igazgatóval/igazgatónővel.

[Your boss asked you to prepare a program for the end of the school year and present it at a teachers' meeting but the program is not ready yet. You want to talk to your boss before the meeting.]

Sit. 13 (Stranger/parking place)
Ön egy áruház előtti parkolóba akart beállni. Sajnos minden hely foglalt volt, kivéve egyet, amely az áruház dolgozóinak volt megjelölve. Ön mégis úgy döntött, hogy beáll oda, és gyorsan igyekszik elintézni a vásárlást. Amikor húsz perc múlva kijött és a kocsihoz sietett, ott állt egy áruházi dolgozó kocsija és benne a vezető ingerültnek látszott.
[You want to park your car in front of a department store but the only free space is the place reserved for the employees of the store. As no other place is available you decide to park your car there. When twenty minutes later you hurry out of the store, you see an employee waiting in his car, looking quite irritated.]

Sit. 14 (Colleague/desk)
Ön az óra után a saját asztalához sietett, hogy lepakolja a könyveit, füzeteit, melyek egy része a szomszédos kolléga asztalára esett. A kolléga éppen hogy megérkezett és szeretné letenni a saját dolgait, amit most az Ön ott lévő holmija nehézzé tesz.
[After class you rush to your desk to put down all your books and papers. Part of your stuff spills over the desk of your colleague who at that moment arrives and has nowhere to put his/her own things.]

Sit. 15 (Colleague/stapler)
Önnek szüksége volt a tűzőgépre és mivel a sajátja valahol eltűnt, kölcsönvette a kolléga tűzőgépét, amit elfelejtett visszatenni. A szünetben a kolléga keresi a tűzőgépét.
[You need a stapler but cannot find your own so you borrow one belonging to your colleague and then forget to put it back. During a break your colleague is looking for his/her stapler.]

Sit. 16 (Friend/damaged car)
Ön kölcsönkérte a barátja jó márkájú kocsiját. Sajnos, amikor hátrafelé tolatott, nem vett észre egy kis oszlopot és csúnyán meghúzta az ajtó oldalát. Most éppen találkozik a barátjával a lakásában, hogy visszaadja a kocsi kulcsait.
[You borrowed your friend's expensive car. Unfortunately, when you were backing out of a parking place, you did not notice a small post and badly dented the side door. Now you meet your friend to return the car keys.]

Sit. 17 (Students/late class)
Ön tíz percet késve érkezik az órára, mert váratlan megbeszélése volt előtte. Most éppen belép az osztályba.

[Due to an unplanned staff meeting you arrive ten minutes late for your class. Now you enter the classroom.]

Sit. 18 (Stranger/unavoidable collision)
Egy áruházban nekimegy egy másik vevőnek. Aligha tudta volna ezt elkerülni, mert a másik elállta az utat.
[You bump into another customer at a department store. You hardly could have avoided doing so because he/she was blocking the way.]

Sit. 19 (Boss/late)
Úgy alakultak a dolgok, hogy végül elkésett az iskolából. Amikor a tanáriba belép, a szoba már teljesen üres, csak az igazgató(nő) tartózkodik benn, és Önre néz.
[It so happens that you arrive late at the school. When you enter the teachers' room there is nobody there except your boss, who is looking at you.]

Sit. 20 (Spouse/late call)
Megígérte a párjának (kedvesének), hogy hívni fogja egy megbeszélt időpontban, de ez csak egy fél órával később sikerül. A párja fölveszi a telefont.
[You promised your spouse/partner to call him/her at a particular time but managed to do so only half an hour later. Your spouse/partner answers your call.]

Sit. 21 (Spouse/argument)
Amikor este munka után találkoztak a párjával/kedvesével, vita/szóváltás alakult ki a közös munkabeosztás és egyéb családi dolgok körül. Egy kicsit összecsaptak, Ön felhúzta magát, felemelt hangon beszélt. A párjának/kedvesének ez rosszul esett és most sértődöttnek látszik.
[When you meet your spouse/partner at home after work you both have an argument concerning household duties and other family matters. The discussion becomes quite heated and you raise your voice. Now your spouse/partner looks hurt.]

Sit. 22 (Friend/birthday party)
Megígérte egy barátjának, hogy elmegy a születésnapi bulira, de végül nem tudott elmenni. A következő napon felhívja a barátját telefonon.
[You promised your friend to come to his/her birthday party but finally you could not go. Next day you call your friend on the phone.]

Sit. 23 (Female colleague/argument)
A tanáriban vita alakult ki, és Ön felemelt hangon beszélt egy kolléganőjével. Most már lecsillapodott, a kolléganőn viszont látszik, hogy rosszul esett neki.
[You are all having a heated discussion in the teachers' room and you raise your voice when arguing with a female colleague. Now the dis-

cussion is over and emotions are down but the female colleague looks offended.]

Sit. 24 (Stranger/slight bumping)
Egy áruházban egy kicsit összeütközik egy másik vevővel.
[You slightly bump into another customer at a department store.]

Appendix 2: Situations grouped according to offence type and according to H's social role

Offence Type

- Time offences
  - Sit. 3 (Friend/late)
  - Sit. 20 (Spouse/late call)
  - Sit. 11 (Private student/late)
  - Sit. 17 (Students/late class)
  - Sit. 19 (Boss/late)
- Space offences
  - Sit. 1 (Stranger/train seat)
  - Sit. 13 (Stranger/parking place)
  - Sit. 14 (Colleague/desk)
- Space/body offences
  - Sit. 7 (Stranger/severe collision)
  - Sit. 18 (Stranger/unavoidable collision)
  - Sit. 24 (Stranger/slight collision)
- Property offences
  - Sit. 2 (Stranger/damaged car)
  - Sit. 16 (Friend/damaged car)
  - Sit. 5 (Child/broken mug)
  - Sit. 6 (Friend/spilt coffee)
  - Sit. 15 (Colleague/stapler)
- Respect offences
  - Sit. 9 (Male colleague/argument)
  - Sit. 21 (Spouse/argument)
  - Sit. 23 (Female colleague/argument)
- Broken promise offences
  - Sit. 10 (Colleague/cassette)
  - Sit. 22 (Friend/birthday party)
  - Sit. 4 (Friend/secret)

Professional performance failures
Sit. 8 (Students/test results)
Sit. 12 (Boss/delayed project)

H's social role

Intimates
Sit. 5 (Child/broken mug)
Sit. 20 (Spouse/late call)
Sit. 21 (Spouse/argument)

Friends
Sit. 3 (Friend/late)
Sit. 4 (Friend/secret)
Sit. 6 (Friend/spilt coffee)
Sit. 16 (Friend/damaged car)
Sit. 22 (Friend/birthday party)

Colleagues
Sit. 9 (Male colleague/argument)
Sit. 23 (Female colleague/argument)
Sit. 10 (Colleague/cassette)
Sit. 14 (Colleague/desk)
Sit. 15 (Colleague/stapler)

Students (S > H)
Sit. 8 (Students/test results)
Sit. 17 (Students/late class)
Sit. 11 (Private student/late)

Boss (S < H)
Sit. 12 (Boss/delayed project)
Sit. 19 (Boss/late)

Strangers
Sit. 1 (Stranger/train seat)
Sit. 13 (Stranger/parking place)
Sit. 2 (Stranger/damaged car)
Sit. 7 (Stranger/severe collision)
Sit. 18 (Stranger/unavoidable collision)
Sit. 24 (Stranger/slight collision)

Child
Sit. 5 (Child/broken mug)

References

Beebe, Leslie M. – Martha C. Cummings 1996. Natural speech act data versus written questionnaire data: How data collection method affects speech act performance. In: Susan M. Gass – Neu Joyce (eds): Speech acts across cultures: Challenges to communication in a second language, 65–86. Mouton de Gruyter, Berlin.

Bergman, Marc – Gabriele Kasper 1993. Perception and performance in native and nonnative apologies. In: Gabriele Kasper – Shoshana Blum-Kulka (eds): Interlanguage pragmatics, 82–107. Oxford University Press, Oxford & New York.

Bharuthram, Sharita 2003. Politeness phenomena in the Hindu sector of the South African Indian English speaking community. In: Journal of Pragmatics 35 : 1523–44.

Blum-Kulka, Shoshana – Juliane House – Gabriele Kasper (eds) 1989. Cross-cultural pragmatics: Requests and apologies. Ablex, Norwood NJ.

Blum-Kulka, Shoshana – Elite Olshtain 1984. Requests and apologies: A cross-cultural study of speech act realization patterns. In: Applied Linguistics 5 : 196–213.

Bonikowska, Małgorzata 1988. The choice of opting out. In: Applied Linguistics 9 : 69–181.

Borkin, Ann – Susan M. Reinhart 1978. Excuse me and I'm sorry. In: TESOL Quarterly 12 : 57–79.

Brown, Penelope – Stephen C. Levinson 1987. Politeness: some universals in language usage. Cambridge University Press, Cambridge.

Clyne, Michael 1984. Language and society in the German-speaking countries. Cambridge University Press, Cambridge.

Cohen, Andrew – Elite Olshtain 1981. Developing a measure of sociocultural competence and the case of apology. In: Language Learning 31 : 113–34.

Coulmas, Florian (ed.) 1981a. Conversational routine. Mouton, The Hague.

Coulmas, Florian 1981b. "Poison to your soul": Thanks and apologies contrastively viewed. In: Coulmas (1981a, 69–91).

Eckert, Penelope – Sally McConnell-Ginet 1998. Communities of practice: Where language, gender and power all live. In: Jennifer Coates (ed.): Language and gender: A reader, 484–94. Blackwell, Cambridge MA & Oxford.

Edmondson, Willis 1981. On saying you're sorry. In: Coulmas (1981a, 273–88).

Fraser, Bruce 1981. On apologizing. In: Coulmas (1981a, 259–71).

Goffman, Erving 1967. Interaction ritual. Doubleday Anchor, Garden City NY.

Goffman, Erving 1971. Relations in public. Harper and Row, New York.

Gu, Yueguo 1990. Politeness phenomena in modern Chinese. In: Journal of Pragmatics 14 : 237–57.

Holmes, Janet 1989. Sex differences and apologies: One aspect of communicative competence. In: Applied Linguistics 10 : 194–213.

Holmes, Janet 1990. Apologies in New Zealand English. In: Language in Society 19 : 155–99.

Holmes, Janet 1995. Women, men and politeness. Longman, Harlow.

Ide, Risako 1998. Sorry for your kindness. In: Journal of Pragmatics 29 : 509–29.

Ide, Sachiko 1989. Formal forms of discernment: Two neglected aspects of linguistic politeness. In: Multilingua 8 : 223–48.

Kasper, Gabriele 1990. Linguistic politeness: Current research issues. In: Journal of Pragmatics 14 : 193–218.

Kasper, Gabriele 2000. Data collection in pragmatic research. In: Spencer-Oatey (2000a, 316–41).

Leech, Geoffrey N. 1983. Principles of pragmatics. Longman, Harlow.

Márquez Reiter, Rosina 2000. Linguistic politeness in Britain and Uruguay: A contrastive study of requests and apologies. John Benjamins, Amsterdam.

Mao, LuMing R. 1994. Beyond politeness theory: "Face" revisited and renewed. In: Journal of Pragmatics 21 : 451–86.

Matsumoto, Yoshiko 1988. Reexamination of the universality of face: Politeness phenomena in Japanese. In: Journal of Pragmatics 12 : 403–26.

Matsumoto, Yoshiko 1989. Politeness as conversational universals—observations from Japanese. In: Multilingua 8 : 207–21.

Meier, Ardith J. 1992. A sociopragmatic contrastive study of repair work in Austrian and American English. Doctoral dissertation, University of Vienna, Vienna.

Meier, Ardith J. 1995. Passages of politeness. In: Journal of Pragmatics 24 : 381–92.

Meier, Ardith J. 1996a. Defining politeness: Universality in appropriateness. In: Language Sciences 17 : 345–56.

Meier, Ardith J. 1996b. Two cultures mirrored in repair work. In: Multilingua 15 : 149–92.

Meier, Ardith J. 1997. What's the excuse?: Image repair in Austrian German. In: The Modern Language Journal 81 : 197–208.

Meier, Ardith J. 1998. Apologies: What do we know? In: International Journal of Applied Linguistics 8 : 215–31.

Norrick, Neal R. 1978. Expressive illocutionary acts. In: Journal of Pragmatics 2 : 277–91.

Obeng, Samuel Gyasi 1999. Apologies in Akan discourse. In: Journal of Pragmatics 31 : 709–34.

O'Driscoll, Jim 1996. About face: A defense and elaboration of universal dualism. In: Journal of Pragmatics 25 : 1–32.

Okumura, Keiko – Li Wei 2000. The concept of self and apology strategies in two cultures. In: Journal of Asian Pacific Communication 10 : 1–24.

Olshtain, Elite 1989. Apologies across languages. In: Blum-Kulka et al. (1989, 155–73).

Olshtain, Elite – Andrew Cohen 1983. Apology: A speech act set. In: Nessa Wolfson – Elliot Judd (eds): Sociolinguistics and language acquisition, 18–35. Newbury, Rowley MA.

Owen, Marion 1983. Apologies and remedial exchanges: A study of language use in social interaction. Mouton, Berlin.

Ringel, Erwin 1991. Die österreichische Seele. Europaverlag, Wien.

Rintell, Ellen M. – Candace J. Mitchell 1989. Studying requests and apologies: An inquiry into method. In: Blum-Kulka et al. (1989, 248–72).

Seale, Clive – Paul Filmer 1998. Doing social surveys. In: Clive Seale (ed.): Researching society and culture, 125–45. Sage Publications, London.

Searle, John R. 1976. A classification of illocutionary acts. In: Language in Society 5: 1–23.

Spencer-Oatey, Helen (ed.) 2000a. Culturally speaking: Managing rapport through talk across cultures. Continuum, London.

Spencer-Oatey, Helen 2000b. Rapport management: A framework for analysis. In: Spencer-Oatey (2000a, 11–47).

Spencer-Oatey, Helen – Wenying Jiang 2003. Explaining cross-cultural pragmatic findings: Moving from politeness maxims to sociopragmatic interactional principles (SIPs). In: Journal of Pragmatics 25: 1633–50.

Suszczyńska, Małgorzata 1999. Apologizing in English, Polish and Hungarian: Different languages, different strategies. In: Journal of Pragmatics 31: 1053–65.

Suszczyńska, Małgorzata 2003. A jóvatevés beszédaktusai a magyarban [Repair work in Hungarian]. In: Általános Nyelvészeti Tanulmányok 20: 255–94.

Trosborg, Anna 1987. Apology strategies in natives/non-natives. In: Journal of Pragmatics 11: 147–67.

Trosborg, Anna 1995. Interlanguage pragmatics: Requests, complaints, and apologies. Mouton de Gruyter, Berlin & New York.

Turnbull, William 2001. An appraisal of pragmatic elicitation techniques for the social psychological study of talk: The case of request refusals. In: Journal of Pragmatics 11: 31–61.

Vollmer, Helmut J. – Elite Olshtain 1989. The language of apologies in German. In: Blum-Kulka et al. (1989, 197–218).

Wierzbicka, Anna 1985. Different cultures, different languages, different speech acts. In: Journal of Pragmatics 9: 145–78.

Wierzbicka, Anna 1991. Cross-cultural pragmatics: The semantics of human interaction. Mouton de Gruyter, Berlin.

Wolfson, Nessa 1988. The bulge: A theory of speech behavior and social distance. In: Jonathan Fine (ed.): Second language discourse: A textbook of current research, 21–3. Ablex, Norwood NJ.

Wouk, Fay to appear. The language of apologizing in Lombok Indonesia. In: Journal of Pragmatics.

Yu, Ming-chung 2003. On the universality of face: Evidence from Chinese compliment response behavior. In: Journal of Pragmatics 35: 1679–710.

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BOOK REVIEWS

Istvan Kecskes: Situation-bound utterances in L1 and L2 (Studies on language acquisition, vol. 19). Mouton de Gruyter, Berlin & New York, 2003, x + 228 pp.

The book under review is about highly conventionalized, prefabricated pragmatic units whose occurrences are tied to standardized communicative situations, e.g., responses like *Not at all, You are welcome* or *You bet* to *Thank you.* These formulaic expressions are called situation-bound utterances (SBUs) by the author (p. 4), who prefers this term to other labels used in regard to similar phenomena (e.g., *interaction rituals, routine formulae, situational utterances, bound utterances* or *institutionalized expressions*). Istvan Kecskes discusses several important issues related not only to this particular group of pragmatic units but also to lexical units in general. They include such timeless problems as the relationship between linguistic knowledge and encyclopedic knowledge, the interplay of lexical units and context, the distinction between literal and figurative meaning and the role of creativity and formulaicity, as well as recently raised ideas about salience or conceptual socialization. This complexity of issues presupposes **an interdisciplinary perspective**. In fact, reading the book we encounter results and hypotheses from several fields: theoretical linguistics, applied linguistics, psycholinguistics, sociolinguistics and second language acquisition. However, they all find their place in Kecskes's **cognitive-pragmatic framework** whose two key properties are "that 1) language research is bound to be concerned with the linguistic and conceptual dimensions at the same time, and that 2) language is a dynamic entity" (pp. 8–9). Another main characteristic feature of the approach applied in this book is its **multilingual (even multicultural) perspective**. It is the analysis of the problems non-native speakers have during acquisition and use of SBUs that enables us to look into the interconnections of linguistic and socio-cultural factors in the use of these pragmatic units. Thus, the endeavour carried out by the author yields, besides the analyses of (American) English, Hungarian, Russian, French, German, Turkish, Arabic, Chinese and Japanese SBUs, such a theoretical building the base of which is the Dynamic Meaning Model (DMM) in combination with the Graded Salience Hypothesis (GSH). DMM and GSH serve as components explaining contextual mechanisms of shaping meaning and interpretation in the dual language system, which is in turn responsible for conceptual socialization.

In chapter 2 Kecskes offers the DMM as an alternative to prototype theory, Wierzbicka's Natural Semantic Metalanguage conception and Bierwisch's two-level conceptual semantics. As we learn, the DMM describes the meaning of a lexical unit, either a word or an SBU, in terms of coresense, consense, culture-specific conceptual properties and word-specific semantic properties (extending the model to SBUs, Kecskes calls the latter ones formula-specific pragmatic properties). Let us see them in some detail taking into consideration here the word from the set of lexical units. Coresense is an abstraction from possible contextual occurrences of the word, while a contextual meaning of the word, consense, realizes a particular aspect or aspects of

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the coresense. To put it the other way around, not all core components are present all the time. If so, it hardly seems to be true that "[c]oresense is the invariant while consense represents the possible variants" (p. 43). Below I will return to problems of coresense. As to culture-specific conceptual properties, encoded in the word, they can be either activated or cancelled by the context. Furthermore, word-specific semantic properties are either encoded in the word or charged by the context. Thus, the DMM can be characterized as expressing the two-way relationship between concept and word and as grasping the dynamic interaction between meaning and context.

Chapter 3 presents further details about the role of context in interpretation. The dynamism of relation between lexical unit and context is a two-way relationship as well: contexts not only specify meanings of lexical units, but are also created by lexical units. For instance, the SBU *Bless you* has the built-in context of someone's sneezing. If this context does not match the actual context because someone coughs but does not sneeze, the SBU cannot be uttered appropriately. It is here that salience comes into play. The most conventional, frequent, familiar or prototypical interpretation is the most salient meaning of a given lexical unit. Primary consense appears to be the most salient meaning, which can be either literal or figurative. Before turning to the connection between salience and modes of interpretation, two remarks by Kecskes have to be mentioned. First, salience can be a matter of lexical and not necessarily of conceptual representation, which also supports the legitimacy of differentiating lexical semantics from conceptual semantics. Second, the literal figurative dichotomy makes sense for language analysis but not for language processing.

According to the Graded Salience Hypothesis of Giora (1997), different linguistic expressions call for different interpretation processes. Direct processing applies when the most salient meaning is intended. It is accessed directly, without processing the less salient (even if literal) meaning. In the case of sequential processing, the more salient meaning is processed first, before the intended one is derived. Parallel processing is induced when more than one meaning is salient. In this case all the equally salient meanings are accessed initially. Consequently, context affects comprehension after the highly salient meaning has been accessed or equally salient meanings have been activated. If the former is compatible with the context, no further effort is needed. However, if it is not, a possible alternative is looked for. As for equally salient meanings, one of them should be selected on the basis of context.

At this point of my review I have to consider the notion of coresense once again. On p. 45 the author modifies what he means by core meaning. Let us recall that a consense may realize some aspects of coresense. According to the modified version, the most salient meaning of a particular lexical unit, e.g., 'easy' of the expression *piece of cake*, is described as coresense. That is, a full-fledged meaning is equated entirely with coresense. In addition, the literal meaning of *kick* and its Hungarian equivalent *rúg* ('to strike out with the foot or feet') is indicated as equivalent coresense in example (17) on p. 50. Here—in connection with examples (18) and (19) —it is also claimed that "contextual use shows that the almost equivalent coresenses are added WSPs [word-specific semantic properties] and CSCPs [culture-specific conceptual properties] which are very different in the two languages". Thus, there are a couple of notions of coresense which are not identical. Unfortunately, they are not kept systematically apart throughout the book.

Investigating SBUs, Kecskes regards not only native speakers but also non-native speakers. This investigation rests on the notions of dual language system (DLS) and Common Underlying Conceptual Base (CUCB) known from his previous work and

introduced briefly on pp. 10 1. Depending on several factors (e.g., proficiency, exposure to language and culture, motivation, age), bilinguals can have a unique competence referred to as the DLS in which neither of the participating languages can be compared to a monolingual system. In order for a DLS to develop, the conceptual structure is to change from an L1-dominated conceptual base into a CUCB which is responsible for the operation of both languages. The development of the CUCB goes together with what Kecskes calls conceptual socialization. Chapter 8 is devoted to this concept entirely. "Conceptual socialization refers to the transformation of conceptual system which undergoes characteristic changes to fit the functional needs of the new language and culture" (p. 157). This yields the gradual development of awareness of cultural differences and the emergence of a dynamic social identity which reflects dual culture. During the process of conceptual socialization L2 learners should be familiarized with the communication patterns of the target language which are dependent on the culture and the structural organization of language. From the literature on parameters of differences between cultures, Kecskes mentions those frames which have some special bearing on the use of SBUs in different cultures. Cultures can be classified in terms of high and low context, directness and indirectness, doing and being, linearity and non-linearity of thought. The first difference, i.e., that of high-context and low-context cultures depends on how much meaning is encoded in the context and in the linguistic code. In the case of the second one, direct style of communication requires clarity, explicitness and accurate representation of facts. In contrast, indirectness is more ambiguous and emotionally rich. The third parameter concerns emphasis put either on activities which result in accomplishments, or on what the communicator is (the individual's birth, family background, age, rank). Finally, the linear cultural pattern highlights beginnings and ends of events, is object-oriented while the message structure of non-linear cultures has multiple themes, for it people and events are more important than time orientation. (American) English or German culture can be described as low-context, direct, doing and linear while cultures like Turkish and Arabic are high-context, indirect, being and non-linear. Cultures such as French, Swedish or Dutch are closer to the former group, Japanese or Russian to the latter. What relation does this classification have to SBUs? Let us take the first distinction as an example. In low-context cultures, the speaker is supposed to convey the meaning accurately and thoroughly. According to this idea, low-context cultures like American would require the use of less SBUs than high-context cultures. As Kecskes cautions, however, we must be careful here. There are two types of SBUs according to their content: situation-bound rituals and situation-bound routines. It is only the former that are not characteristic of American culture. It seems to prefer routines to rituals while in high-context cultures it is the other way around.

Since these two main groups of SBUs are introduced in chapter 5, which is about the distinguishing features of SBUs, let us turn to a presentation of SBUs in detail. SBUs can be considered as **pragmatic idioms that take a special place among idioms** because they have some features along which they differ from other idiomatic expressions. First, SBUs create their own context, i.e., are strongly tied to standard situations and are not used outside their usual context. Second, when idioms are used it is rare that the whole sentence is idiomatic. In contrast, SBUs usually form one single unit which functions as an utterance and no change is possible within the unit. Third, if SBUs derive from freely generated expressions (another possible way of their originating is from other types of fixed expressions), they may often keep their original composi-

tional meaning. In certain cases expressions such as *Give me a hand, I'll talk to you later, Don't go away* can be processed both in a compositional and non-compositional way. In other words, they can have more than one salient meaning. However, this is usually not the case with idioms where the relation between compositional meaning and functional meaning is almost lost (for instance: *wet blanket, spill the beans, touch base with, go Dutch, get down to the wire*). Fourth, because of the above possibility of different consenses, SBUs are more context-sensitive than other idioms.

As mentioned already, Kecskes distinguishes between situation-bound rituals (e.g., *God bless you*) and situation-bound routines (e.g., *How are you doing?, Nice to meet you, Welcome aboard*). This distinction has to do with whether SBUs directly say something about the action and/or participants or relate them to other situations or agents. The situation-bound rituals are especially frequent in tradition-oriented Turkish, Arabic, Japanese and Chinese cultures. Their use is almost obligatory and no freely-generated phrases are appropriate instead. The situations which require the use of SBUs in tradition-oriented cultures may not be even recognized by native speakers of English as events demanding any verbal reaction.

In chapter 6 an analysis of the results of three tests conducted by Kecskes demonstrates the differences between native and non-native speakers **in the interpretation of (American) English SBUs**. In Test 1 students were asked to describe the meaning of SBUs without context. Both the native speakers' and non-native speakers' responses support the Graded Salience Hypothesis. The majority of students found the most salient meaning. Where parallel processing was present because two meanings were equally salient (e.g., *Get out of here, Give me a break*), native speakers were divided in their decision since there were no contexts which could help in shaping meaning. However, non-native speakers (who had studied English in their home country and had been in the USA for at least six months) preferred literal meaning to figurative meaning, which supported the author's hypothesis about non-native speakers' language processing which usually prioritizes literal meaning. In Test 2 students were given dialogues with SBUs most of which have both a literal and a figurative meaning as salient. Context was biased for the figurative meaning and the experimentees had to recognize that meaning in the given situation. There was no difference in how native speakers processed SBUs in context. When parallel processing had to be applied because both literal and figurative meanings were salient, context played a crucial role. This was not necessarily the case for non-native speakers and contextual cues did not always help them to find the correct salient meaning if the salient meaning was not the literal one. Finally, Test 3 consisted of SBUs which usually have the figurative meaning as the most salient. This test used them in their less salient meaning which was their original literal one. Responses of native speakers demonstrated that the less salient meaning was processed sequentially with no problem if the context was clear. In a few cases, however, where the situation was unclear, some native speakers and many non-native speakers directly processed the most salient meaning.

On the basis of a thorough analysis of the test results Kecskes rightly states that language processing is difficult for non-native speakers because "they do not have direct access to the most accessible (for the native speakers) information in the target language since it is not stored or coded in their L1-dominated mental lexicon. What is stored and encoded there is what is salient in the native tongue and culture of language learners, and that usually does not work in the target language" (p. 133). Moreover, what can be salient in the L2 for a non-native speaker is the literal meaning

of the target language expression. That is why non-native speakers did not have any difficulty identifying the compositional meaning of SBUs but problems occurred when literal meaning was not the most salient meaning.

In chapter 9 Kecskes gives an account of investigating **the use of SBUs by non-native speakers of English** (who—as with the above tests—had studied English in their home country and had been in the USA for at least six months). Subjects, among which there were also native speakers of English, were given three types of test: a Dialogue Interpretation Test, two Discourse Completion Tests and a Problem Solving Test. The Dialogue Interpretation Test aimed at determining the extent to which the interpretation of American English SBUs by non-native speakers was the same as that by native speakers. Like Test 2 above, items of this test contained a dialogue with an SBU that students were to interpret. In the first Discourse Completion Test participants had to give a response to questions such as: *Can I talk to you after class?* or *How was the party last night?* In the second Discourse Completion Test students were expected to supply the missing part of a short dialogue. For instance:

– Hi, John. How is it going?
– .....
– Listen, can I talk to you after class?
.....
– OK, see you after class.
– .....

The Problem Solving Test described a frequent situation in which an utterance should be made. This test needed more culture-specific knowledge than Discourse Completion Tests. For example: "You want to talk to your professor. You knock at his door, open it, and say what?"

Like the general conclusion of the three **interpretation** tests above, one of the main findings of testing **the use** of SBUs by non-native speakers is that they had difficulties with respect to language-specific principles of salience in the target language and their conceptual socialization had not been completed yet. This was especially true in cases where parallel processing emerged and non-native speakers had to decide whether the more salient meaning of an SBU was figurative or literal in the given situation.

The use of SBUs demonstrated three developmental stages: (1) the period of strong L1-culture transfer, (2) false generalizations and (3) when things fall into place. The analysis of the results revealed that length of stay in the USA was less important than distance of cultures and familiarity with English discourse patterns.

As the last theoretical question to be discussed in the present review, I want to mention the topic of chapter 7, namely the dichotomy of creativity and formulaicity. Kecskes states that – in comparison with generating a sentence – to construct a text or conversation needs a more complex type of creativity which has, on the one hand, grammatical and, on the other, logical and socio-cultural aspects. However, we do not only use our ability to create novel strings but also recall the prefabricated units that were stored in our mind from previous encounters with those units. Elsewhere in linguistic literature the question of what is stored and what is computed online is seriously taken as well. Thus, Jackendoff (2002) proposes such a major reorganization of the theory of grammar which sets his framework apart from mainstream generative

linguistics bearing on, among others, connections between a theory of competence and a theory of performance. From those changes, here I want to pay attention only to a small segment. This is the recognition that lexical items include not just words but also productive morphological affixes and idioms. Idioms themselves are unanalysed wholes with regard to their semantics. Nevertheless, from a phonological and syntactic point of view they consist of separable words, so constituting phrasal (syntactic) categories rather than lexical ones. As to language acquisition, what is interesting now is not issues of Universal Grammar but of extracting patterns from stored items through generalization. Kecskes also notices the large-scale use of ready-made chunks or prefabricated units **during L1 acquisition**. However, it turns out that they are meant very broadly because they include such an NP as *cup of tea*. The fact that it is initially learned as one unit is evidenced by the pluralized form *cup of teas*. Discussing the role of formulaic sequences (including SBUs) **in L2 acquisition**, Kecskes takes into consideration the following factors: (a) difference between the L2 and L1 acquisition process, (b) differences between naturalistic and classroom environment, (c) differences between child and adult L2 learning, (d) differences in individual learners and e) difference in the role of formulae. What is common in all studies is that they focus mainly on the structural features of memorized chunks and their role in the acquisition of syntax. Adult L2 learners often assume that an element in an expression may be varied according to a phrase structure rule, when in fact no variation or some very restricted one is allowed in native-like usage. Kecskes, however, emphasizes that this assumption of L2 learners depends on the type of fixed expressions, i.e., prefabricated chunks vs. SBUs. The former can support the development of syntactic rules by the learner breaking them down into their constituents. This can occur because these memorized chunks have a compositional structure and most of them are semantically transparent (e.g., *What is this?, Can I have...?, I wanna..., There is no...*). However, this is not the case with the latter, i.e., SBUs that are pragmatic rather than syntactic units. If broken down into constituents, they could do more harm than good to L2 learners because their functional meaning can hardly be figured out from the elements they contain. Consequently, SBUs cannot be expected to take part in the development of grammatical competence in L2.

As to typographical layout, some details should have been amended before publishing this book. There are redundant spaces between words and redundant hyphens between syllables. The use of quotation marks of different form ("..." vs. "...") is unjustified and references to linguistic literature from which quotations are taken are in the wrong place, i.e., before the closing quotation mark. Typos also occur: e.g., *dischronically* (p. 19), *it is use in a context* (p. 37), *coresense units the two levels* (p. 43), *it units the lexical and conceptual level* (p. 48), *human cognition trends to be geared* (pp. 66, 79), *In a attempt* (p. 123), *pervious experience* (p. 180), *c.f.* (many times throughout the book). Some editorial effort could have co-ordinated references to linguistic literature in the main text and the list of references. Some of the former cannot be found in the latter (e.g., Kiefer 1997 — p. 5, Nuyts 2001 — p. 8, Vygotsky 1962 — p. 34, Cook 1997, Rosch 1977 — both on p. 36, Chomsky 1997 — p. 55, Katz et al. 1998 — p. 68, Mey 1993 — p. 109).

To conclude, Kecskes's book stimulates discussions on several general theoretical topics such as e.g., modelling the meaning of various lexical items including SBUs, the interaction between meaning and context, the reflection of the language and culture interplay in the process of conceptual socialization, issues of salience in interpretation

as well as problems of acquisition of SBUs by L2 learners. Despite the criticism contained in the present review, *Situation-bound utterances in L1 and L2* is well worth reading because it is a volume **provoking further discussion and highlighting those areas where further research** is needed.

Károly Bibok

References

Giora, Rachel 1997. Understanding figurative and literal language: The graded salience hypothesis. In: Cognitive Linguistics 8:183–206.

Jackendoff, Ray 2002. Foundations of language: Brain, meaning, grammar, evolution. Oxford University Press, Oxford.

Enikő Németh T. and Károly Bibok (eds): Pragmatics and the flexibility of word meaning (Current research in the semantics/pragmatics interface, vol. 8). Elsevier, Amsterdam, 2001, xii + 330 pp.

This multidisciplinary book brings together the current research of scholars with a variety of backgrounds but a common focus, the interaction between lexical semantics and pragmatics. The thirteen authors examine a range of specific linguistic phenomena and theories and use a variety of frameworks, methodological approaches and languages in developing their arguments. There are, however, certain theories that appear consistently throughout the book (i.e., conversational implicature, relevance theory, optimality theory and Bierwisch's two-level conceptual semantic approach). There is also a common theme: that research in semantics and research in pragmatics complement each other and each may offer valuable insights that could enrich research in the other.

Introduction by Enikő Németh T. and Károly Bibok

The editors briefly discuss the emergence of lexical pragmatics as a new linguistic discipline which connects lexical semantics and pragmatics. They point out that the papers in the book have a common aim of exploring this interaction, but each examines different phenomena and uses a variety of methods and frameworks. This is followed by a concise summary of each article.

Two case studies in lexical pragmatics by Reinhard Blutner and Torgrim Solstad

In this paper, Blutner and Solstad point out that the situated meanings of many words are combinations of their lexical meanings and superimposed conversational implicature. They propose a bidirectional version of optimality theory which integrates expressive and interpretive optimization as a framework for investigating the interactions between the (mental) lexicon and pragmatics. They use this framework to account for the effects of negative strengthening in connection with gradable adjectives, typically antonyms such as *happy – unhappy*, *good – bad*, and to resolve the puzzles of dimensional designation of spatial adjectives such as *long*, *high*, *broad*, *deep* and *thick*. Throughout the article the authors use examples to support and/or justify their claims. Graphs and model diagrams have been created to make optimal pairs and spatial objects look more visual to readers and enable them to understand and find

connections between old versions of OT and newly created versions of OT by the authors. However, they neglect to do this when they explain Jäger's variant (2000) of the weak version of bidirectional OT (pp. 15–6), which is difficult to follow without proper illustrations. It is also not clear exactly why the authors consider the M-principle of Levinson (2000, 33) as an epiphenomenon that results from the interaction of the Q- and I-Principles.

On the scales and implicatures of *even* by Igor Boguslavsky

In his paper, Boguslavsky addresses some unusual phenomenon of the scales and implicatures of *even*, mostly in Russian. He presents rich data to discuss the opposition between two interpretations of *even* utterances *not X, not even Y but Z* labeled as "diminuendo" and "crescendo" sentences and their conflict with the scalar implicature of *even* in the traditional approach. He argues that the difference in their interpretation derives from different strategies used by the addressees. Some of Boguslavsky's examples are, however, rather confusing and fail to make the point. This is especially true for example (22) on page 37: "The poem was not published and not even written." What the author probably wants to say is "The poem was not published and, in fact, was not even written." But the problem, as far as it sounds logical, is with the word *written*. To say it was not even written makes it sound like it never existed.

The author concludes that scalar implicature "belongs exactly to the intersection of pragmatics and linguistic semantics" (p. 49) because on the one hand it must be interpreted in the context based on the literal meaning, the context of the utterance, and background knowledge, and on the other hand it is language-specific.

The flexibility of inference in triggers for inferable entities: Evidence for an interpretability constraint by Sharon A. Cote

Cote's paper discusses the complexity of inferable entities — entities not yet directly introduced into the discourse context but having a relevant relationship to some other activated entity. She uses data from a corpus study to examine various types of inferable entities and the "triggers", referring expressions, used by speakers to lead hearers to make the intended inference in discourse, and argues that hearers determine reference according to an interpretability constraint: "[a] hearer must be able to assign as much meaning to a pronoun as is needed to avoid causing a speaker to fail to achieve his discourse purpose" (p. 68). Cote provides examples of ways in which this constraint can be satisfied.

In defence of monosemy by Thorstein Fretheim

Although Fretheim does not dispute the existence of lexical polysemy, he claims that often what would be taken as lexical polysemy should actually be considered monosemy with the meaning being modified by context-driven inferences. He relies on Sperber and Wilson's (1986/1995) Relevance Theory as a guiding theory, accepting their argument that most concepts do not map onto words, only a fraction of a language user's conceptual repertoire is lexicalized. There is no doubt about the correctness of this statement; however, it is a bit lopsided. Several researchers have argued that the concept–word relationship is a two-way street in which the word as a linguistic entity gains some independence and affects the concepts (e.g., Vygotsky 1962; Cruse 1992; Kecskes–Papp 2000). The reason for lexical polysemy should be sought in this unique relationship.

In his paper, Fretheim focuses discussion on four lexical entries of "function words": *after all* and *at least* in English, *(al)likevel* and *med en gang / med det samme* in Norwegian, from a monosemy-based relevance theory perspective. He points out that these function words are used as blueprints to engage the hearer in a specific kind of inferential activity. In all four cases, Fretheim argues that they can be better defined not in terms of lexical polysemy but in terms of a single lexical definition that combines with substantial reliance on contextual enrichment in actual conversational dialogue.

Pragmatics and the flexibility of theoretical terms in linguistics: Two case studies by András Kertész

In this article, Kertész addresses what he sees as a three-part problem involving theoretical terms in linguistics: 1. What is the structure of theoretical terms in generative linguistics? 2. How does the structure of theoretical terms influence the structure of scientific explanations in generative linguistics? 3. To what extent are the answers to the first two questions related to semantic and pragmatic factors? Kertész adopts two theoretic frameworks: holism (cognitive theory of metaphor) and modularism (two-level approach) to exemplify the applicability of cognitive approaches to the investigation of concept formation in generative linguistics. Kertész demonstrates that the similarities and differences between the two solutions to the above three questions produce important generalizations concerning the applicability of cognitive approaches in the analysis of scientific concept formation.

The development of the grounding predication: Epistemic modals and cognitive predicates by Péter Pelyvás

In the paper Pelyvás addresses some factors that led to the emergence of the grounding predication (a device that relates sentences/utterances to the situation of their use, with special attention to the speaker's epistemic commitment) by examining two areas: modal auxiliaries (a grammatical category) and cognitive/modal predicates (a lexical category). Pelyvás discusses the general tendencies in the development of the epistemic senses of the modals from their root meanings, analyzing the changes in the image schemas of the modals that mark the development. He pays special attention to changes within immediate scope responsible for the presence vs. absence of relations like permission or obligation, to the reference-point construction, and to subjectification, which is the critical step in the development of the grounding predication. Pelyvás demonstrates that the root and epistemic schemas developed from modals can be applied to modal predicates (e.g., *permit*, *allow*, *oblige*, *forbid*) as well as to cognitive predicates (e.g., *seem*, *appear*, *think*, *assume*). Although the author's approach is logical and interesting, he relies mainly on Langacker's (1999) and Sweetser's (1990) studies and completely ignores other authors such as Bybee and Fleischman (1995), Papafragou (2000), and Nuyts (2000) who have made invaluable contribution to the understanding of epistemic modality.

What is polysemy?—A survey of current research and results by Gergely Pethő

Pethő begins his comprehensive overview of polysemy by pointing out that the main problem for polysemy research is that there has been poor communication between the various strands of research in this area. This has resulted in fragmentation of research and has hindered progress. Using Paul Deane's (1987) dissertation on polysemy as a point of departure for a summary of the research done in polysemy from the early 1980's to the present, he presents findings from researchers in various linguistic

fields. He concludes that, despite the apparent incoherence of their terminology and methods of description and the fragmentation of the research, the various approaches generally seem to complement rather than contradict each other and suggests that the approaches be considered "pieces of a puzzle" that all contribute to the understanding of polysemy. The author is right when he refers to the poor communication between the various strands in polysemy research. At the same time, however, he also contributes to the problem because his overview is rather fragmented and sometimes it is difficult to see what criteria Pethő used when he selected whose contribution he was going to discuss in his overview. His overview is done from a lexical semantics perspective rather than from a lexical pragmatics perspective.

Interpreting morphologically complex lexemes revisited by Tvrtko Prćić

Prćić emphasizes the complementary nature of semantics and pragmatics. Using English agentive nouns as examples, he examines in detail first the role of semantics and then the role of pragmatics in interpreting them. In his discussion of semantics, he focuses on morphosemantic compositionality, binary processing and semantic underspecification. He concludes that a decontextualized, semantics-only interpretation leaves the sense of the lexeme insufficiently specified and requires information to be filled in during pragmatic specialization. In his discussion of the role of pragmatics he addresses inferables, the transparency/opacity cline, explicit, implicit, and implied meaning, and pragmatic specialization. He concludes that "contextualized, pragmatics-enriched, interpretation of morphologically complex lexemes [...] results in a reading characterized by all information required for successful interpretation appropriately supplied" (p. 240).

Cultural constraints on meaning extension: Derivational relations between actions and happenings by Raissa Rozina

Rozina examines the pattern of semantic derivation that results in the development of general slang in Russian. She distinguishes general slang, which is spoken or at least understood by all adult speakers of standard Russian, from slang that is associated with a particular social or age group. She examines what it is about general slang words that enables educated speakers of Russian to distinguish the slang meaning from the standard word meaning even though the words generally do not differ semantically from standard Russian. She hypothesizes that this is based on regular patterns of semantic extension which are different for slang words and standard words. Her analysis focuses on the bidirectional patterns of meaning extension in Russian verbs. She concludes that the derivation of happenings from action verbs results in standard meanings, while the derivation of actions from happenings results in slang meanings. The examples the author uses to justify her claims are overwhelming and without some knowledge of Russian the reader may miss the point.

The communicative function of the Hungarian adverbial marker *majd* 'later on, some time' by Ildikó Vaskó

In her paper, Vaskó addresses the Hungarian adverbial marker *majd* that can be paraphrased as 'later on, some time' from a pragmatic perspective within the framework of relevance theory. She uses ample examples from Hungarian to show that *majd* consists of these two characteristic features: a certain state of affairs will take place some time in the future, and for the successful realization of the events that *majd* is connected to, certain conditions have to be met. Vaskó argues that this adverb *majd*

encodes not only conceptual meaning (e.g., postpone of an event in the time flow) but also conveys procedural information (e.g., speakers' attitude) by instructing the hearer to constrain the temporal reference to a time in the future when interpreting the utterances with *majd*.

How the lexicon and context interact in the meaning construction of utterances by Károly Bibok and Enikő Németh T.

Bibok and Németh T. examine three types of Hungarian utterances: utterances with implicit arguments, utterances with implicit predicates, and utterances in which the predicate and argument are connected to each other by "co-composition". They begin with descriptions of each type of utterance and demonstrate through a systematic and unified analysis that the meaning construction of these types of utterances can only be described through "an intensive interaction between the lexicon and context" (p. 317). They apply Sperber and Wilson's (1995) cognitive principle of relevance to the three types of utterances and argue that it explains the possibility that an argument or predicate can be lexically unrealized. If arguments and predicates can be identified by 1. lexical conceptualization, 2. taking immediate context into consideration or 3. extending the context, then these arguments and predicates should be lexically unrealized according to the principle of relevance. The cognitive principle of relevance also explains the possibility of composing larger units from predicates and arguments by "co-composition".

Evaluation

This book examines the interaction between lexical semantics and pragmatics by combining insightful exploration of theories from a range of research perspectives in the field of linguistics. It makes the case for a new line in pragmatics research: lexical pragmatics. The diversity of topics explored and different methodologies and frameworks used result in a collection of articles with little connection beyond a similar format and a few theories that seem to be a common thread. However, the editors explain that this collection of articles is meant to stimulate further work in the new field of lexical pragmatics rather than attempt to present an integrated approach at this stage. This argument is completely acceptable although it would have made the volume more reader-friendly if those papers which have something in common had been placed one after the other in the book. First of all, we think of Fretheim and Pethő; Prćić and Bibok Németh T.

The theoretical complexity of the book ranges from in-depth analysis of single lexical units (e.g., *even, after all*) to an examination of different views on a major theory: monosemy vs. polysemy. The majority of the articles assume a great deal of previous knowledge of linguistic theory, and some are quite complex and technical. However, examples in several languages (English, Russian, Hungarian, Norwegian) and diagrams in most articles make the complex theories more accessible to the reader. In spite of this, in some articles (e.g., Rozina, Vaskó) it is not easy to follow the arguments without any knowledge of the given languages.

This collection of papers will function as a source book for those who are interested in lexical semantics and lexical pragmatics. Not many of the readers, however, will read all articles. Those whose interest is in lexical semantics will be more satisfied than their counterparts who take up the book to learn more about lexical pragmatics. The fact of the matter is that there is little about pragmatics in any sense of the word in some of the articles (Fretheim, Kertész, Pelyvás, Pethő, Rozina). They are good and interesting studies on their own right in lexical semantics but do not have much

to do with lexical pragmatics as the discipline is presented in the introduction and the rest of the papers.

The literature referred to and reviewed in most papers is rich and comprehensive. It gives guidance to the readers in the relatively new field of lexical pragmatics. However, there is no mention about an important work that also discusses lexical pragmatics in relation to cognitive semantics: Fischer (2000).

In sum, the primary goal of this collection of papers is to inform readers about an emerging new field of research: lexical pragmatics. This goal is served well. Although the book is too advanced for use as a textbook in any but the most advanced linguistics class, it will serve as an excellent resource for students focusing on language-oriented research and for any linguists interested in lexical semantics and exploring the new linguistic discipline of lexical pragmatics.

Julia Coryell – Saihua Xia

References

Bybee, Joan – Susan Fleischman 1995. Modality in grammar and discourse: An introductory essay. In: Joan Bybee – Susan Fleischman (eds): Modality in grammar and discourse, 1–14. Benjamins, Amsterdam.

Cruse, D. Alan 1992. Antonymy revisited: Some thoughts on the relationship between words and concepts. In: Adrienne Lehrer – Eva F. Kittay (eds): Frames, fields, and contrasts: New essays in semantic and lexical organization, 289–306. Lawrence Erlbaum, Hillsdale NJ.

Deane, Paul D. 1987. Semantic theory and the problem of polysemy. Doctoral dissertation, University of Chicago.

Fischer, Kerstin 2000. From cognitive semantics to lexical pragmatics: The functional polysemy of discourse particles. Mouton de Gruyter, Berlin.

Jäger, Gerhard 2000. Some notes on the formal properties of bidirectional optimality theory. In: Reinhard Blutner – Gerhard Jäger (eds): Studies in optimality theory, 41–63. Linguistics in Potsdam, Potsdam.

Kecskes, Istvan – Tünde Papp 2000. Foreign language and mother tongue. Lawrence Erlbaum, Mahwah NJ.

Langacker, Ronald W. 1999. Grammar and conceptualization. Mouton de Gruyter, Berlin.

Levinson, Stephen C. 2000. Presumptive meanings: The theory of generalized conversational implicature. MIT Press, Cambridge MA.

Nuyts, Jan 2000. Epistemic modality, language, and conceptualization. Benjamins, Amsterdam.

Papafragou, Anna 2000. Modality: Issues in the semantics–pragmatics interface. Elsevier, Amsterdam.

Sperber, Dan – Deirdre Wilson 1986/1995. Relevance: Communication and cognition. Blackwell, Cambridge MA & Oxford. 1st/2nd edition.

Sweetser, Eve 1990. From etymology to pragmatics: Metaphorical and cultural aspects of semantic structure. Cambridge University Press, Cambridge.

Vygotsky, Lev S. 1962. Thought and language. MIT Press, Cambridge MA.

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Cole, Jennifer 1995. The cycle in phonology. In: Goldsmith (1995): 206–44.

Goldsmith, John A. (ed.) 1995. The handbook of phonological theory. Blackwell, Cambridge MA and Oxford.

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(1) (a) A sólymaid elszálltak
the falcon-gen-pl-2sg away-flew-3pl
‘Your falcons have flown away.’

Examples can be referred to in the text as (1a), (1a–d), etc.

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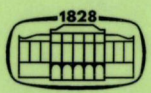

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GUEST EDITORS' NOTE

The present volume—which could be entitled *Hungarian Studies in Cognitive Semantics*—is intended to give the reader at least a vague impression of the problems tackled by cognitive semantics research in Hungary. However, right at the outset the identification of what kind of approaches count as manifestations of cognitive semantics is anything but trivial. First, some commentators evaluate the latter as one of the most significant developments in the history of linguistics constituting a "revolution" (cf. for example Tomasello 1999, 478), while others—most notably formal semanticists—consider it to be a blind alley. Second, despite a series of well known attempts found in textbooks and companions, there have not been found firm criteria yielding a generally acceptable definition of "cognitive semantics" so far. Third, the impossibility of such a definition is closely connected to the fact that the theories which call themselves "cognitive semantic" very often accept diametrically opposed empirical hypotheses and incompatible methodological principles. To mention just the most straightforward example, approaches conforming to the standards of the analytic philosophy of science may label themselves as "cognitive semantics" just as those which radically reject the latter—think of the well-known dichotomy between modular and holistic cognitive semantics (see Gardner 1985 and Müller 1991 on the historical roots of this dichotomy). Fourth, the links which irrespective of the differences are assumed to connect various approaches to the field are very often of a social nature rather than a matter of the rational content of the particular theories (see e.g., Tomasello 1999; Redeker–Janssen 1999; Eckardt 1993).

Against the background of these difficulties, instead of relying on some generally accepted points of departure resulting in necessary and sufficient conditions of cognitive semantics research, in compiling the present special issue the editors made use of vague guiding principles only. According to these, the papers exhibit the following characteristics in different ways and to different degrees:

(i) The acceptance of the methodological assumption that linguistics, whatever it may be, should be conducted as one of the subdisciplines of cognitive science.

(ii) In accordance with this, cognitive semantics is such that its object of investigation is "meaning" as part of cognition (whatever "meaning" means).

(iii) As a result of the constitutive interdisciplinarity of cognitive science, cognitive semantic approaches are also of an essentially interdisciplinary nature.

(iv) At least partly social aspects such as the reference to the "canon" that is a set of seminal monographs which motivated research (see for example Fauconnier 1994; Jackendoff 1983; Lakoff 1987; Lakoff–Johnson 1980; Langacker 1987; 1991; Sweetser 1990, etc.) — together with introductory works and collections of papers popularizing the basic ideas and making the first results known for a relatively wide audience (Bierwisch–Lang 1989; Janssen–Redeker 1999; Allwood–Gärdenfors 1999; Rudzka-Ostyn 1988; Schwarz 1992, etc.).

(v) Clearly social aspects like the existence of institutions (research programmes, projects, journals, associations, university departments etc.) devoted to cognitive semantics research.

Bearing in mind both the difficulties and the guiding principles thus mentioned, the present volume is structured as follows. The first part (Kövecses, Benczes) includes papers which represent cognitive semantics as an established scientific enterprise in the sense of (i), (ii) and (iv) and (v) in so far as they further develop and apply approaches which are known as paradigm examples of cognitive semantics. This part is entitled *Intradisciplinary Approaches*, because the papers clearly support the development of cognitive semantics as a relatively autonomous discipline, although, like each of the approaches, they show interdisciplinary features as well. The papers in the second part entitled *Methodological Issues* (Győri, and Kertész–Rákosi) emphasize, along the lines of (i), (ii) and (iii), the flexibility of cognitive semantic research: both of them are characterized by a rather extreme kind of interdisciplinarity, they seem to strive to transgress the boundaries of institutionalized cognitive semantic theories and even question some of the basic tenets and methodological background assumptions of the latter. Finally, in accordance with (ii) the two papers (Pethő, Vecsey) of the third part (*Cognitive Aspects of Proper Names*) exemplify how and to what extent cognitivist considerations may lead to the reinterpreation of the problem of "meaning" raised by the analytical philosophy of language. In this respect, they nicely illustrate the thesis according to which one of the objectives of cognitive semantics is the reformulation and empirical solution of philosphical problems (see e.g., Gardner 1985).

As this structure suggests, the present compilation differs from most special issues of *Acta Linguistica Hungarica* in that its aim is not to illus-

trate applications of linguistic theories to Hungarian data, but rather, all the papers centre on deeply rooted theoretical, foundational and methodological problems of cognitive semantics research per se in a way in which these problems have been raised and discussed in Hungary today.

In *A Broad View of Cognitive Linguistics* Zoltán Kövecses argues for one of the central assumptions of cognitive semantics according to which the latter, beside giving an insight into linguistic structure, may also tackle a wide variety of social and cultural phenomena. The author claims that human understanders and producers of language possess cognitive capacities which are independent of their ability to use language. Thus he demonstrates that cognitive linguistics is far more than a theory of language. In particular, it may be interpreted as a theory of "meaning-making" in general in its innumerable linguistic, social and cultural facets.

In the first part of her paper *Metaphor- and Metonymy-based Compounds in English: A Cognitive Linguistic Approach* Réka Benczes puts forward two hypotheses. Firstly, metaphor and metonymy theory can account for the semantics of noun–noun compounds which is activated by metaphor and/or metonymy. Secondly, there are regular patterns of metaphor- and metonymy-based compounds, depending on which constituent is affected by conceptual metaphor and/or metonymy. In the second part she examines metaphor- and metonymy-based noun–noun compounds whose meaning is affected by the simultaneous activation of both metaphor and metonymy. Finally, she analyzes the productive patterns that underlie this latter type.

Gábor Győri (*The Adaptive Nature of "Meaning as Understanding"*) discusses semantic change as a cognitive adaptation process. The author puts forward his claim according to which such a process adjusts the culturally shared conceptual category system of a language to changing conditions in the environment. In this way the evolutionary function of cognition supports the adaptive orientation in a flexible way relative to the stability of environmental conditions. Consequently, the cognitive function of language is to promote social cognition in order to facilitate the sharing of knowledge that proves functional and adaptive in the given physical, social and cultural environment of a group of individuals. From this finding the author draws a series of further conclusions concerning the nature of the adaptive construal of phenomena, semantic leaps in the form of metaphor, metonymy and other kinds of meaning extension, and the nature of semantic change.

András Kertész and Csilla Rákosi (*Whole-part and Part-whole Inferences in Generative and Cognitive Linguistics*) raise methodological problems of theory formation in general and of cognitive semantics in particular. Their paper focuses on the relation between the analytical philosophy of

science on the one hand and modular and holistic approaches to cognitive linguistics, on the other. It is argued that Chomsky's, Bierwisch and Lang's, and Lakoff and Johnson's approaches all apply non-demonstrative inferences which the analytical philosophy of science evaluates as fallacies. The authors outline a metatheoretical framework that centres on plausible inferences and they show that the inferences the theories mentioned make use of are plausible rather than fallacious. As a result, they draw far-reaching conclusions concerning basic aspects of theory formation in linguistics and thus they motivate the revaluation of the methodological foundations of linguistic inquiry.

Gergely Pethő's paper (*On Intuitions about Proper Names*) presents a fierce criticism of an empirical experiment concerning the use of proper names. Machery et al. (2004) carried out an experiment which tested the intuition of US and Chinese students about the use of proper names and which was intended to be the empirical counterpart of one of Kripke's thought experiments. They arrived at the conclusion that the way most respondents used proper names is not compatible with the causal-historical theory of proper names suggested by Kripke. Pethő shows, firstly, that this experiment is burdened with a series of technical difficulties as a result of which this conclusion is untenable. Secondly, he also argues that there is a series of deep conceptual problems which question the acceptability of Machery et al.'s line of argumentation and confirm the legitimacy of the author's criticism.

Zoltán Vecsey's contribution entitled *The Semantic Content of Partially Descriptive Names* offers a critique of the approach developed by Scott Soames in his recent book *Beyond Rigidity* which puts forward a new version of millianism. Soames assumes that some linguistically complex names such as *Professor Saul Kripke* or *Princeton University* have partially descriptive semantic content. According to Soames, in addition to their unique referents, these names are always associated with a special kind of description. However, Vecsey argues that Soames's theory of partially descriptive names is unworkable. The author claims that descriptive contents can be found only in the background knowledge of competent speakers.

Each paper was refereed by at least two reviewers. The editors are grateful to them for their contribution to the quality of this special issue. The papers were prepared and the issue itself was compiled within the project *Empirical Foundations of Cognitive Semantic Theories* conducted by the Research Group for Theoretical Linguistics of the Hungarian Academy of Sciences at the University of Debrecen.

András Kertész, Péter Pelyvás

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References

Allwood, Jens – Peter Gärdenfors (eds) 1999. Cognitive semantics: Meaning and cognition. John Benjamins, Amsterdam & Philadelphia.

Bierwisch, Manfred – Ewald Lang (eds) 1989. Dimensional adjectives: Grammatical structure and conceptual interpretation. Springer, Berlin & Heidelberg & New York.

Eckardt, Barbara von 1993. What is cognitive science? MIT Press, Cambridge MA.

Fauconnier, Gilles 1994. Mental spaces. Aspects of meaning construction in natural language. Cambridge University Press, Cambridge.

Gardner, Howard 1985. The mind's new science: A history of the cognitive revolution. Basic Books, New York.

Jackendoff, Ray 1983. Semantics and cognition. MIT Press, Cambridge MA.

Janssen, Theodorus A. – Gisela Redeker (eds) 1999. Cognitive lingusitics: Foundations, scope, and methodology. Mouton de Gruyter, Berlin & New York.

Lakoff, George 1987. Women, fire, and dangerous things. The University of Chicago Press, Chicago.

Lakoff, George – Mark Johnson 1980. Metaphors we live by. The University of Chicago Press, Chicago.

Langacker, Ronald 1987. Foundations of cognitive grammar, Vol. 1: Theoretical prerequisites. Stanford University Press, Stanford.

Langacker, Ronald 1991. Foundations of cognitive grammar, Vol. 2: Descriptive application. Stanford University Press, Stanford.

Machery, Edouard – Ron Mallon – Shaun Nichols – Stephen P. Stich 2004. Semantics, cross-cultural style. In: Cognition 92 : B1–B12.

Müller, Ralph-Axel 1991. Der (un)teilbare Geist. Modularismus und Holismus in der Kognitionsforschung. Mouton de Gruyter, Berlin & New York.

Redeker, Gisela – Theodorus A. Janssen 1999. Introduction. In: Janssen – Redeker (1999, 1–12).

Rudzka-Ostyn, Brygida (ed.) 1988. Topics in cognitive linguistics. John Benjamins, Amsterdam & Philadelphia.

Schwarz, Monika 1992. Einführung in die Kognitive Linguistik. Francke, Tübingen.

Sweetser, Eve 1990. From etymology to pragmatics: Metaphorical and cultural aspects of semantic structure. Cambridge University Press, Cambridge.

Tomasello, Michael 1999. Cognitive linguistics. In: William Bechtel – George Graham (eds): A companion to cognitive science, 477–87. Oxford University Press, Cambridge MA & Oxford.

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A BROAD VIEW OF COGNITIVE LINGUISTICS*

ZOLTÁN KÖVECSES

Abstract

Cognitive linguistics can offer an account not only of linguistic structure but also of a wide variety of social and cultural phenomena. The comprehensive account presented in this paper is crucially based and dependent on cognitive capacities that human understanders and producers of language possess quite independently of their ability to use language. By discussing the cognitive processes and the various linguistic, social and cultural issues they help us describe and explain, the author demonstrates that cognitive linguistics is far more than a theory of language; one can think of it as a theory of "meaning-making" in general in its innumerable linguistic, social and cultural facets.

1. Introduction

In this paper, I will show that cognitive linguistics can not only offer an account of linguistic structure but also that of a wide variety of social and cultural phenomena. In other words, I will suggest that cognitive linguistics is a much more comprehensive enterprise than it is commonly taken to be by many—both inside and outside the field. Furthermore, I will claim that the comprehensive account to be presented is crucially based and dependent on cognitive capacities that human understanders and producers of language possess independently of their ability to use language.

In particular, I will discuss cognitive capacities in relation to the following linguistic, social and cultural phenomena:

(1) Categorization: the nature of concepts and debates concerning art

Knowledge organization: frame semantics and cultural issues

Metonymic thought: metonymy in language and social thought

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Metaphoric thought: metaphor in mind, language, and politics

Image-schemas: understanding literature

Figure-ground alignment: grammatical structure

Mental spaces: semantic anomaly

Conceptual integration: creativity in linguistic and conceptual structure, as well as in everyday activities

By discussing the cognitive processes and the various linguistic, social and cultural issues, I want to highlight the wide scope of cognitive linguistics. By providing a discussion of such a wide variety of linguistic, social and cultural topics in terms of cognitive linguistics, I wish to demonstrate that cognitive linguistics is far more than a theory of language; we can perhaps think of it as a theory of "meaning-making" in general in its innumerable linguistic, social and cultural facets, of which the above topics are just a handful of examples.

But if cognitive linguistics is indeed such a comprehensive theory of meaning-making in general, why do we call it "cognitive **linguistics**"? And in addition to the problem that the scope of cognitive linguistics is arguably much broader than language, we have another problem as regards the naming of the enterprise; namely, that the term "cognitive" seems tautological in relation to issues of meaning. Meaning-making as such can only be cognitive. For these two reasons, I believe that the term 'cognitive linguistics' is indeed a misnomer and that it should be replaced by another term. At the end of the paper, I will propose some candidate names for the field.

All in all, then, the general goal of the paper is theoretical rather than descriptive. Although I will describe several specific case studies taken either from my own work or that of others, my main intention is to show the wide scope of cognitive linguistics and the possibilities that this view can offer in the study of the general meaning-making capacity of human beings. (Consequently, the references made in the paper are not intended to offer a complete bibliography of the field.)

2. Categorization: the nature of concepts and debates concerning art

Human meaning-making depends in part on how we categorize entities and events in the world; that is, on the nature of conceptual categories,

or concepts, we have concerning these entities and events. The classical view of categories is based on the idea of essential features. In order to have a conceptual category, the members of the category must share certain essential features. On this view, categories are defined by essential features, or, in more modern terminology, by necessary and sufficient conditions (Fillmore 1975). Based on empirical work in cognitive psychology (see, e.g., Rosch 1978), a number of authors began to criticize the classical view of categorization. Fillmore (1975), Lakoff (1987), Taylor (1989), and others raised serious objections concerning the validity of such an approach to categories and offered a radically new alternative, which became known as "prototype categorization." In a way, the theory of prototype categorization became the cornerstone of cognitive linguistics. In the new rival view, categories are defined not in terms of necessary and sufficient conditions, but with respect to prototypes and various family resemblance relations to these prototypes.

Philosopher of language John Austin extended the notion of categories to the senses of words (see Lakoff 1987). That is to say, Austin thought of the various senses of a word as a category of senses that is organized around a prototypical sense. He showed by way of analyzing the different senses of words that one of the senses is central, while others are non-central, or peripheral. As we know well today, it is very common for words to have a central prototypical sense with the other senses deriving from that sense either through metonymy or metaphor.

The notion of prototype was extended to "linguistic categories" by cognitive linguists; that is, to the terms we use to describe language. Linguistic categories include *noun*, *verb*, *modifier*, *phrase*, *clause*, *sentence*, etc. The same question that can be raised in connection with everyday categories can also be raised in connection with grammatical categories: Are they defined by a set of essential properties or by certain prototypes? Recent work in this area suggests that it makes sense to think of these categories as prototype-based as well (Lakoff 1987; Taylor 2003).

It seems reasonable to believe then that the notion of prototype-based organization in categories applies to three distinct levels or areas:

(2) Categories for everyday concepts
Categories for senses of words
Categories for linguistic concepts

Work in cognitive linguistics and psychology has indeed shown that in all three of these areas the categories we possess have an internal structure

that is organized around prototypes (see, e.g., Gibbs et al. 1995; Taylor 1989; 2003).

What does all of this have to do with real-world issues in culture and society? We can suggest that there is a close connection between the nature of our categories and many important cultural and social issues. More specifically, it seems reasonable to claim that the emergence, existence, and often the resolution of cultural and social issues arises from the nature of our categories. Simply put, the nature of our categories (i.e., whether they are based on essential features or prototypes) does seem to play a role in the cultural and social issues involving these categories.

As one such case, let us take the everyday concept of art and see whether it is defined according to the classical view or the prototype view. As a matter of fact, this is not the most important reason why we analyze the concept here; as can be expected, the concept of art cannot be defined by essential features. More importantly, the discussion of the structure of the concept of art can shed light on why art has been a debated category probably ever since its inception and particularly in the past two hundred years.

Kövecses (in preparation) examines some of the history of the category of art in the past two hundred years on the basis of the *Encyclopedia Britannica* (2003). What he finds in this history is that the category undergoes constant redefinition in the 19th and 20th centuries. Diverse and rival conceptions of art challenge the "traditional" view — that is, the most prevalent "conservative" view. Impressionism, cubism, surrealism, pop art, and the like, are reactions to the traditional view and to each other. But what is the traditional view of art?

The traditional conception of art can be arrived at by examining those features of art that are challenged, negated, or successfully canceled by the various movements of art such as the ones mentioned above. (3) is a summary of the assumed features of the traditional view and the art movements that cancel them.

(3) A work of art:

Represents objective reality (canceled by impressionism, expressionism, surrealism);

Should evoke objective and rational thoughts (canceled by symbolism, surrealism);

Is representational, i.e., it consists of natural figures and forms (canceled by symbolism, cubism, abstract art);

Is made by means of certain canonical activities (canceled by constructivism);

Uses certain canonical techniques (canceled by impressionism);

Uses canonical materials (canceled by constructivism);

Uses canonical themes (canceled by constructivism, social realism, pop art);
Uses objects that are elevated, that belong to "high" culture (canceled by pop art);
Is for the elite of society (canceled by pop art);
Is for display (canceled by conceptual art);
Is a physical object (canceled by conceptual art).

As can be seen, even those features of art that many would take to be definitional for all forms of art (such as the one that art represents objective reality, the one that it is representational, and the one that it is some kind of physical object) can be explicitly negated and effectively canceled. That is, it is not simply the case that someone at some point challenged a feature of the definition, but that the challenge was actually successful to the degree that a new art movement was born out of the successful new definition.

Given the analysis of what these art movements challenge, negate, or cancel on the basis of the *Encyclopedia Britannica*, certain features of the traditional view of art emerge:

- First, according to the traditional view, art imitates, represents, or models, objective reality. It is also an aspect of this view that the more faithful the resemblance is, the better the work of art.
- Second, a work of art should evoke objective and rational thoughts. These come from the representations of objective reality.
- Third, a work of art is representational in the sense that it mirrors reality by representations (e.g., painted objects and events) that the audience can recognize and understand (e.g., the object represented is a man, a tree, a dog). In other words, the figures and forms of a work of art are natural figures and forms.
- Fourth, a work of art is such that certain canonical activities, techniques, and materials are used that lead to a final product — the work of art. For example, a painter *paints* a painting using certain materials and techniques, and a sculptor *sculpts* a sculpture using different materials and techniques.
- Fifth, works of art are **about** something; they have a theme. In the traditional view, the theme is often something elevated, such as death, freedom, love.
- Sixth, the themes typically belong to "high" culture, not "low" culture. In addition, the audience of works of art is generally the elite of society.

- Seventh, a work of art is typically for display or exhibition or sale in certain designated places, such as museums, galleries, auctions, concert halls, etc.
- Eighth, a work of art is a physical object—an object that can be seen, touched, read, or heard.

Based on these features, we could say that we have to do with art:

(4) when someone models reality by means of certain natural representations of it by making use of certain activities, materials, techniques, and when the resulting physical product is about something important for especially those who are educated enough to understand it and who can experience the physical product in certain designated places.

In a way, this sounds like a plausible definition of the traditional view of art. We could conservatively claim that this is what "real" art is—all the other forms of art being extensions from it. We can think of the definition as providing a prototype of art for many people.

But the main point of the previous sketchy survey of art history is that there are always people who do not accept this definition. They can constantly challenge, undermine, or plainly negate every one of these features. In other words, the features given are not essential ones for art. If they were essential, they could not be so easily challenged and canceled. Without them, the category of art should collapse. But it does not seem to collapse; instead, it has been around for centuries. It thrives as newer and newer definitions are given for it. In sum, we can suggest that for many people the concept of art has a central member—the traditional conception—and many non-central ones. The non-central ones may become the prototypes of art for some people, and then these new prototypes can be further challenged.

We do not have space to present more of the analysis here, but it should be clear by now that the category of art is what philosophers of language call an "essentially contested concept". Such concepts assume a prototype-based organization, and it is their very structure that invites contestation. The nature of the widespread phenomenon of cultural and social debates can only be understood if we study and understand the nature of our categories that give rise to the phenomenon by virtue of their very structure.

3. Knowledge organization: frame semantics and cultural issues

Much of our knowledge about the world comes from the categories we have. Categories are mentally represented as frames, schemas, or models (see, e.g., Schank–Abelson 1977; Fillmore 1982; Langacker 1987; Lakoff 1987). The terminology is varied (see Andor 1985), but the idea behind it is roughly the same. We can use the following working definition of frames: A frame is a structured mental representation of a coherent organization of human experience. Perhaps the best known slogan for this idea is Fillmore's paradigm-setting statement: "Meanings are relativized to scenes [i.e., frames]." Additional characteristics of frames include that in most cases they are not defined by necessary and sufficient features and that they often consist of several entities related to particular actions or events. An early attempt to look at meaning in language in this light is Fillmore's case grammar, which he later developed into his "frame semantics".

However, these ideas become important in the study of almost any facet of life — and not just language. We are trying to make sense of the world even when we are not consciously aware of this, and the world as we experience it is always the product of some prior categorization and framing by ourselves and others. As a matter of fact, it is now a well established fact in cognitive linguistics and psychology that different individuals can interpret the "same" reality in different ways. This is the idea that became known in cognitive linguistics as "alternative construal" (see, e.g., Langacker 1987).

Below I present two brief case studies to show that the notion of frame, or schema, or model takes us way beyond issues in grammar or language in general. (The case studies are discussed in more detail in Kövecses, in preparation.) I worked out the first example on the basis of Eve Sweetser's lecture notes to her "Language and Mind" course and used it in my own course when I taught the same course at UC Berkeley. Here is the basic issue: How do we categorize the various objects and events we encounter in the world? Clearly, most of our categories are based on similarity (especially family resemblance) among members of a category. That is, many categories are held together by family resemblances among the items that belong to a particular category. In this sense, most of our conventional categories for objects and events are similarity-based ones. For example, the things that one can buy in a store are commonly

categorized based on their similarity to each other; thus, we find various kinds of nails (short and long ones, thick and thin ones, etc.) in the same section of a hardware store. They form a similarity-based category. However, we can also find nails in other sections of the store. Some nails can occur in sections where, for example, things for hanging pictures are displayed. Clearly, a nail is not similar to any of the possible things (such as picture frames, rings, short strings, adhesive tapes, maybe even a special hammer) displayed in this section. How is it possible that certain nails appear in this section? Or, to put it in our terms, how is it possible that nails are put in the same category with these other things? The answer is that in addition to similarity-based categories, we also have "frame-based" ones. That is to say, categories can be formed on the basis of which things go commonly and repeatedly together in our experience. If we put up pictures on the wall by first driving a nail into the wall and then hanging the picture frame on the nail by means of attaching a metal ring or a string on the frame, then all the things that we use for this purpose may be placed in a single category. But this category will be **frame-based**—not **similarity-based**.

As my second example, consider a case that I read about in the *San Francisco Chronicle* in the spring of 2003. The example has to do with how framing plays a crucial role in seemingly straightforward matters, such as who should be considered one's mother in particular real-life situations. Let us take the story of a Hungarian-born couple living in the San Francisco Bay Area in California, whose story was reported in the *San Francisco Chronicle* (May 10, 2003). A 56-year-old woman, called Ilona, married a man called Istvan. This was her second marriage. She had two adult daughters from the previous marriage. They decided to have a child of their own, but their only option was for Ilona to conceive through in vitro fertilization by having viable eggs implanted in her uterus. The egg donor was Ilona's older daughter, Cecilia, aged 28. Nine months after the successful fertilization, Ilona gave birth to a healthy baby called Monica. The *San Francisco Chronicle* writes:

(5) In the giddy aftermath of the birth, by cesarean section, Istvan looked at his wife cradling the newborn swathed in blankets, smiled at his stepdaughter looking on from afar, and asked the question that many still pose: "What is she, a mother or grandmother?"

How come he wasn't sure? We have a situation here in which an adult man whose wife just gave birth to a child using his genetic materials does

not know whether his wife is a mother! How can this be? In light of the present section, we can suspect what the answer is. The complex frame of motherhood contains five submodels (Lakoff 1987). The prototypical mother is the woman who gives birth to the child; who nurtures the child; who provides the genetic materials; who is the father's wife; and who is one generation older than the child. The doubt can arise for Istvan because Ilona did not provide the genetic materials of the child; it was provided by her own daughter, Cecilia. This shows that the lack of one feature characterizing prototypical mothers can be sufficient grounds for questioning motherhood.

But there are further puzzles that emerge from the situation. How does Cecilia think of Monica? What is the relationship between Ilona's adult daughter, Cecilia, and her new infant daughter, Monica? That this is not simply theoretical speculation can be gathered from the same article:

(6) One look at Monica, and Cecilia's maternal feelings surfaced. She said she didn't expect such a reaction. Throughout the pregnancy, Cecilia referred to Monica as her sister. Afterward, she started feeling as if Monica were her daughter.

Cecilia has real maternal feelings, although in many ways she is not the mother; she did not give birth to the child, she is not nurturing the baby, and she is not the father's wife. Is she entitled to such feelings? She can reasonably argue that she provided part of the baby's genes, and so she is a mother. Would she also say that the baby has two mothers? We do not know, but it would not be an unreasonable idea either.

Moreover, to complicate the situation further, Cecilia is expecting a new baby of her own. The birth of the baby will pose a question concerning the relationship between Cecilia's new baby and Ilona: Will Ilona become a grandmother for the first time or the second time? This will depend on whether we categorize Monica as Ilona's or Cecilia's child.

Finally, what will be the relationship between Cecilia's new baby and Ilona's baby, Monica? Will they be sisters, or will Monica be the aunt of Cecilia's new baby? Again, this depends on whether we take Cecilia to be Monica's mother or not.

As this example shows, categorization and framing can have other than a referential function and significance. How we categorize and frame entities may determine how we feel and, conversely, the feelings we have toward entities may influence the way we categorize them. All of this is possible because we have a flexible conceptual system, which can give

rise to a number of different ways of conceptualizing the "same" situation. Categorization and framing are ways of thinking about the world, some of our most important "construal operations". With their help, we make sense of the world, but, as the example indicates, at times they can also make this understanding difficult and puzzling.

4. Metonymic thought: metonymy in language and social thought

Cognitive linguists do not think of metonymy as a superfluous linguistic device whose only function is to avoid literalism and to make the expression of meaning more varied. Kövecses and Radden (1998) offer the definition of metonymy as follows:

(7) Metonymy is a cognitive process in which a conceptual element, or entity (thing, event, property), the vehicle, provides mental access to another conceptual entity (thing, event, property), the target, within the same frame, or idealized cognitive model (ICM).

Thus, for example, given the RESTAURANT frame, or idealized model, the speaker of the sentence "The **ham sandwich** spilled beer all over himself" directs attention, or provides mental access, to the conceptual element PERSON EATING THE HAM SANDWICH (target) through the use of another conceptual element HAM SANDWICH (vehicle) that belongs to the same frame. (There has been an upsurge in the cognitive linguistic study of metonymy in recent years; for extensive collections of papers, see Panther–Radden 1999; Barcelona 2000; Dirven–Pörings 2002; Panther–Thornburg 2003. For research concentrated on metonymy, see, among others, Brdar–Brdar-Szabó 2003; Brdar-Szabó–Brdar 2003; Ruiz de Mendoza Ibanez 2000.)

As we mentioned previously, our knowledge of the world comes in the form of structured frames, schemas, or ICMs. These can be construed as wholes with parts. Since frames are conceptualized as wholes that have parts, there are two general configurations of wholes and parts that give rise to metonymy-producing relationships: the "whole and its parts" configuration and the "part and part" configuration. A variety of specific metonymy-producing relationships can be observed within both configurations (for details, see Kövecses–Radden 1998; Radden–Kövecses 1999).

We can think of categories themselves as having a part-whole structure. One example of this is the CATEGORY-AND-PROPERTY ICM. In

the case of categories, the most important part is the properties used to define the category. The category as a whole has properties as parts. In the sentence in (8), the first "boys" indicates the category of boys as a whole, while the second indicates the typical qualities, or features, of boys, such as 'being unruly' (i.e., we have the metonymy CATEGORY FOR PROPERTY).

(8) Boys will be boys.

That is to say, a quality, or property, of boys ('being unruly') is made reference to by the second use of "boys" that captures the category as a whole. Incidentally, this analysis shows that sentences like *Boys will be boys* do not represent empty tautologies, as would be the case in many other approaches to meaning.

The reverse can also occur in the case of the category-and-property frame. A property can stand for the entire category. Consider a sentence like (9).

(9) African-Americans were once called blacks.

Here we have the metonymy PROPERTY FOR THE CATEGORY. As a matter of fact, the metonymy applies twice in the sentence—both *African-Americans* and *blacks* are instances of it. Euphemisms (as well as dysphemisms) are often based on this specific type of metonymy. As the example shows, the conceptual structure of the euphemism is the same in both cases (i.e., PROPERTY FOR THE CATEGORY). What changes are the connotations that go together with the particular property that replaces the old one (*African-American* does not, as yet, have the negative connotations of *black*).

Another kind of metonymy involves a category and a member of the category. This works within the CATEGORY-AND-MEMBER ICM. The category itself is viewed as a whole, while the members are the parts. The relationship between the whole category and a member is often reversible, as can be seen in the examples to follow:

(10) (a) She's on the pill. (CATEGORY FOR A MEMBER)
(b) Do you have an aspirin? (A MEMBER FOR THE CATEGORY)

In (10a), the whole category of pills stands for a particular member of the category, namely, contraceptive pills, whereas in (10b) a particular

member of a category (i.e., aspirin) stands for the entire category of pain-relievers.

This type of metonymy plays an important role in accounting for not only certain linguistic phenomena but also for various aspects of human thought, such as which members of categories lead to prototype effects (i.e., the effect that some members of categories are judged to be better examples of a category than others), how we reason about the world, why we have the social expectations we do, and the like. The survey below is based on Lakoff's (1987) work.

First, consider again the category of mother. We noted that the prototype of mother is a woman who gave birth to you, who nurtures you, who provided your genetic materials, who is your father's wife, and who is one generation older than you are. In other words, when the basic models converge in a particular case to form a complex model for mother, we have a very good example of mother. Here the prototype effect is produced by the convergence of the basic models. But let us assume that we have a large number of such mothers where the basic models are all present and let us assume that some of these mothers have a job and go out to work, while some others do not have a job, they are housewives. If we ask a large number of people whether those mothers are better examples of the category that go out to work or those who are housewives, the likely answer is going to be: the housewives. Why is this the case?

The answer is that stereotypical members tend to be looked at as better examples of a category than less or non-stereotypical members. The housewife mother is one such stereotype. Thus, we have an additional source of prototype effects. Among all the members of the mother category that are characterized by the five basic models, some category members are better examples than others: this is the housewife mother stereotype. This stereotype is defined in relation to one of the basic models that characterize the category: the nurturance model. Furthermore, this is an unnamed category member. There is no conventional name for housewife mothers; Lakoff simply used *housewife mother* to be able to talk about this particular category member, but it is not a conventional way of referring to such mothers. However, the contrastive category member of mothers who go out to work does have a conventional name: *working mother*. Working mother is defined in contrast to the housewife mother stereotype. It is usually the case that more prototypical members of a category do not have special, distinctive names,

whereas category members that are considered less prototypical do. This is what happens in the case of housewife mother and *working mother.*

In addition to being additional sources of prototype effects, stereotypes also define many of our social expectations. This is why under normal circumstances we are more likely to use sentences such as *She's a mother, but she is not a housewife* than *She's a mother, but she is a housewife.* The conjunction *but* is used to cancel our expectations concerning what we expect mothers to be like. The same applies to many other categories, such as husband, bachelor, mother-in-law, Italians, Jews, East Europeans, and so forth. Thus the analysis of metonymy may be an important diagnostic tool in discovering our social prejudices.

Second, if a category has some very commonly occurring members, these can acquire special status in that they can produce prototype effects. For example, in the case of the category of birds, such typical members include robins, sparrows, swallows, etc. in North America. That is to say, typical members can stand for the category as a whole. Moreover, typical members play an interesting role in reasoning. In one experiment, people were told that there is an island where there are some typical birds (like robins and sparrows) and some non-typical ones (like ducks). The subjects were asked: If the robins and sparrows have a disease, would the ducks get it? The answer was yes. They were also asked: If the ducks have a disease, would the robins and sparrows get it? The answer was no. In other words, there was an asymmetry in making inferences based on prototypical and non-prototypical members. This is metonymy-based reasoning.

Third, ideal members within a category also have a special status. It is a common phenomenon that when we think of some category, we have in mind an ideal member of that category. When we think about who we want to marry, we have ideal husbands and wives in mind; when we are teenagers, we want to have a special kind of love: ideal love; when we are planning to buy a car, we often think (or daydream) about an ideal car; and so on. That is to say, categories such as husband, wife, love, car, job, have ideal members and they can stand for the entire category. And as the examples show, we also use them to set goals. The ideal members of categories can often dictate how we act in the world and what emotions we have as a result of these actions.

Fourth, a single individual member of a category can also stand for the whole category. This happens in the case of paragons. A paragon is an individual that is an ideal. For example, in the US the paragon

of baseball players is still Babe Ruth or Joe DiMaggio for many people. Paragons also play an important cognitive role: We often imitate them and have a great deal of interest in them. Let it suffice to mention just a few additional examples of paragons like Diana, Prince Charles, and Madonna. It is this interest in paragons that the business world often capitalizes on. Paragons can thus have a pervasive social effect and can be capitalized on for business purposes.

Fifth, and finally, categories often have "salient members". Salient members commonly stand out among category members by virtue of a particular property that they have. They can also determine how we think about other category members. If a particular type of airplane crashes (let us say a DC-10), people will avoid this type of airplane for a while as their means of travel, no matter how safe DC-10s in general are. In other words, salient members of a category are routinely used in thought: We generalize from salient examples to other examples of the category. Needles to say, this can also result in a variety of social and economic effects.

In conclusion, metonymic thought pervades the way we think about the social and cultural world. In addition, it can have a variety of social, cultural and economic effects, and can influence what we take to be the real world. In other words, the importance and effect of the cognitive process of metonymy extends way beyond language and seems to be at the core of how we act in our social and cultural worlds.

5. Metaphoric thought: metaphor in language, mind, and politics

Beginning with Lakoff and Johnson's (1980) seminal book, *Metaphors we live by*, cognitive linguistics opened up a new front in the study of language and the mind. This is perhaps the best known chapter in the history of cognitive linguistics (for an overview, see Kövecses 2002). In essence, the theory maintains that metaphor is a cognitive process in which one domain of experience (A) is understood in terms of another domain of experience (B). Metaphor consists of a source (B) and target domain (A) such that the source is a more physical and the target a more abstract kind of domain. Examples of source and target domains include the following: Source domains: WARMTH, BUILDING, WAR, JOURNEY; target domains: AFFECTION, THEORY, ARGUMENT, LIFE. Thus we get

conceptual metaphors: AFFECTION IS WARMTH; THEORIES ARE BUILDINGS; ARGUMENT IS WAR, LIFE IS A JOURNEY. What this means is that the concepts of AFFECTION, THEORY, ARGUMENT, and LIFE are comprehended via the concepts of WARMTH, BUILDING, WAR, and JOURNEY, respectively.

Why do particular target concepts go together with particular source concepts? The traditional answer to this question is that there is some kind of similarity between the two concepts; that is, concept A is similar to concept B in some respect. While cognitive linguists accept this kind of motivation for certain metaphors, they also take into account another kind of motivation for many other metaphors. The choice of a particular source to go with a particular target can also be motivated by some embodied experience.

Consider as an example the metaphor AFFECTION IS WARMTH. We can suggest that we find this metaphor natural because the feeling of affection correlates with bodily warmth. We experience such embodied correlation very early on in life. To be hugged and to be close to our first caretaker produces this kind of warmth that gives us comfort and eventually the feeling of affection. This example shows that the correlation between the experience of affection and that of warmth need not be conscious. As a matter of fact, it is characteristic of such embodied experiences that they are not conscious most of the time. We experience such correlations in bodily experience pre-conceptually and pre-linguistically.

As another example, consider heat. Heat and warmth are of course related, in that they are both descriptions of temperature, but as far as bodily motivation for metaphor is concerned, they are quite different. That is to say, they motivate very different conceptual metaphors. Imagine the following situation. You are working hard, let us say sawing or chopping wood, or you are doing some vigorous exercise, like running or aerobics. After a while you're beginning to work up heat, you will feel hot, and maybe begin to sweat. We can say that the vigorous bodily activity produces an increase in body heat. Typically, when you engage in vigorous bodily activity, your body will respond in this way. Similarly, when you are very angry, or when you have strong sexual feelings, or when you are under strong psychological pressure, your body may also produce an increase in body heat that manifests itself physiologically in a variety of ways. In all of these cases, the increase in the intensity of an activity or state goes together with an increase in body heat, and your body responds this way automatically. The correlation between the in-

crease in the intensity of the activity or the state, on the one hand, and the production of body heat, on the other, is inevitable for the kinds of bodies that we have. We can't help undergoing the correlation between intensity (of these activities and states) and body heat. This correlation forms the basis of a linguistic and conceptual metaphor: INTENSITY IS HEAT. But the correlation is at the level of the body, and it is in this sense that metaphor is just as much in the body as it is in language or thought.

Since INTENSITY is an aspect of many concepts, the source domain of heat will apply to many concepts, such as ANGER, LOVE, LUST, WORK, ARGUMENT, etc. In general, we suggest that many conceptual metaphors (i.e., source and target pairings) are motivated by such bodily correlations in experience.

As was mentioned, in the traditional view of metaphor similarity is the main motivation for bringing together two concepts in a metaphorical relationship. One frequently mentioned example in the literature to justify the view that metaphors are based on similarity is: "Achilles was a lion." It is proposed that Achilles and lions share a property, namely, that of being brave. This similarity gives rise to the metaphor.

Let us look at some other examples where the basis of metaphor can be claimed to be some kind of similarity. Take a passage from the *San Francisco Chronicle* analyzed by Kövecses (in preparation):

(11) Last fall, in a radio interview with a San Diego radio station and later on CNN's *Larry King Live,* [singer Harry] Belafonte likened Secretary of State Colin Powell to a plantation hand who moves into the master's house, in this case the White House, and only supports policies that will please his master, President Bush.

In (11), one of the things that Belafonte knows about Powell is that Powell is an African-American. Since slaves were also African-Americans, it is easy for Belafonte to set up the metaphor, or more exactly, metaphorical analogy. We can assume that this feature shared by Powell and the slaves helps trigger the particular analogy. In other words, a feature (being an African-American) that is shared by an element of the target (in this case, Powell) and an element of the source (the slaves) help the speaker arrive at an extensive set of analogical relationships between source and target.

But in many other cases the shared element is not such an obvious feature. Often, the target and the source are characterized by similar structural relations—without any shared features of the communicative situation that might trigger the recognition of the shared relations (such as in the case above) (see, e.g., Gentner 1983; Holyoak–Thagard 1996;

Glucksberg–Keysar 1993). For example, we can find shared generic-level structure in such domains as HUMAN LIFETIME and the LIFE-CYCLE OF PLANTS. This structure would include, for instance, something like: "living organisms have a period of their existence when they are most active" (whatever this means either for people or for plants) and "living organisms decline after this period". This case is of course a highly conventional metaphor: THE HUMAN LIFETIME IS THE LIFE-CYCLE OF A PLANT. But the same kind of analogy accounts for any number of similar metaphors. Take, for instance, the metaphor used by Harry Belafonte. We would not need any explicit triggers to say of an especially servile secretary of state or minister that he or she is a slave, thus evoking the GOVERNMENT IS A PLANTATION metaphor in which the president or prime minister is the master and the secretaries of state or ministers are the slaves. This is because we have the ability to recognize shared generic-level structure such as "inferiors are servile to superiors in order to please them" in distinct domains.

In summary, we can think of embodiment and similarity as different kinds of constraint on the creation of metaphor. Embodiment seems to be a stronger kind of constraint, in that it works automatically and unconsciously.

The idea that metaphors can be motivated by correlations in bodily experience has given rise to a "neural theory of metaphor". It is the brain that runs the body, and if metaphor is in the body it must also be in the brain. Embodied experience results in certain neural connections between areas of the brain (these areas corresponding to source and target). For example, it may be suggested that when the area of the brain corresponding to affection is activated, the area corresponding to warmth is also activated. The assumption in recent neuroscientific studies (see, for example, Gallese–Lakoff 2003) is that when we understand abstract concepts metaphorically, two groups of neurons in the brain are activated at the same time; when one group of neurons fires (the source), another group of neurons fires as well (the target). We can then assume that, for example, neurons corresponding to intensity and heat, respectively, are activated together in the brain when we think about the abstract concept of intensity in connection with certain events, activities, and states. Similarly, when we think about abstract amounts, such as prices, the neurons corresponding to amount and those corresponding to verticality (up–down) are co-activated in the brain. These co-activations of groups of neurons yield what are known as primary con-

ceptual metaphors INTENSITY IS HEAT and MORE IS UP (LESS IS DOWN). (On "primary metaphors", see Grady 1997.)

In which parts of the brain are the two domains located? According to this paradigm of research, the source domain is located in the sensory-motor system, whereas the target domain is found in higher cortical areas. This idea is the neuroscience version of the notion of the embodiment of metaphor, which states that source domains typically come from more concrete and physical sensory-motor experience, while target domains are less physical in nature.

American discourse about morality often involves two foundational conceptual metaphors (Lakoff 1996): (i) MORALITY IS STRENGTH (cf. (12)) and (ii) MORALITY IS NURTURANCE (cf. (13)). (This section is based on Kövecses 2002; in preparation.)

(12) BEING GOOD IS BEING UPRIGHT
BEING BAD IS BEING LOW
DOING EVIL IS FALLING
EVIL IS A FORCE
MORALITY IS STRENGTH

According to this metaphorical system of morality, evil can act on an **upright** person who can either **fall** (become bad) or remain upright (remain good). The evil can be either an external or an internal force. External evil may be a dangerous situation that causes fear. Internal evil may be, for example, the seven deadly sins. In either case, a moral person would apply a counterforce in an effort to overcome the force of evil and would be successful in overcoming it. Thus, in this view, moral "strength" is based on the notion of physical strength.

(13) THE COMMUNITY IS A FAMILY
MORAL AGENTS ARE NURTURING PARENTS
PEOPLE NEEDING HELP ARE CHILDREN NEEDING NURTURANCE
MORAL ACTION IS NURTURANCE

In this second set of metaphors, morality appears to be more of an "other-directed" issue than a "self-directed" one. Whereas in the "strength" metaphor there is only a single moral agent, in the nurturance version there are two—people who need help and people who have a responsibility to provide that help. As Lakoff (1996) notes, it is not the case that

the two metaphors exclude each other in the actual practice of morality in everyday life. They are used together on most occasions, but different people may give different priorities to them. For some people, morality is primarily defined in terms of the MORALITY IS STRENGTH metaphor, whereas for others it is defined mostly in terms of MORALITY IS NURTURANCE.

In Lakoff's (1996) account, the different priorities that people give to the two metaphors explain two conceptions of American politics — conservatism and liberalism. If one considers the MORALITY IS STRENGTH metaphor as more important, this person is likely to be attracted to conservative ideas and ideals in politics. On the other hand, if someone considers the "nurturance" metaphor more important as regards morality, this person is more likely to be a liberal as far as political issues are concerned. Why? The link between one's moral and political views is provided by a metaphor for the concept of nation mentioned above: A NATION or SOCIETY IS A FAMILY. Society is conventionally viewed as a family with the state as a parent and citizens as children. The two views of morality that were briefly outlined above imply different conceptions of what a family is (Lakoff 1996). In the "moral strength" metaphor, the family consists of independent and self-reliant individuals and morality is taught and learned primarily through discipline (to resist evil). Lakoff characterizes this view of the family in an interview as follows (*UCBerkeley News*, October 27, 2003):

(14) The conservative worldview, the strict father model, assumes that the world is dangerous and difficult and that children are born bad and must be made good. The strict father is the moral authority who supports and defends the family, tells his wife what to do, and teaches his kids right from wrong. The only way to do that is through painful discipline—physical punishment that by adulthood will become internal discipline. The good people are the disciplined people. Once grown, the self-reliant, disciplined children are on their own. Those children who remain dependent (who were spoiled, overly willful, or recalcitrant) should be forced to undergo further discipline or be cut free with no support to face the discipline of the outside world.

By contrast, in the "nurturance" metaphor the family consists of people who have a moral obligation to help each other to begin with. In this view of the family, morality is taught and learned less through discipline than through nurturance. Again in Lakoff's words (*UCBerkeley News*, October 27, 2003):

(15) ... the progressive worldview is modeled on a nurturant parent family. Briefly, it assumes that the world is basically good and can be made better and that one must work toward that. Children are born good; parents can make them better. Nurturing involves empathy, and the responsibility to take care of oneself and others for whom we are responsible. On a larger scale, specific policies follow, such as governmental protection in form of a social safety net and government regulation, universal education (to ensure competence, fairness), civil liberties and equal treatment (fairness and freedom), accountability (derived from trust), public service (from responsibility), open government (from open communication), and the promotion of an economy that benefits all and functions to promote these values, which are traditional progressive values in American politics.

Now the priorities given to the two metaphors will have implications for one's political views because the two conceptions of the family and morality will influence one's view of the nation as a family. The metaphor-based notion of morality will have different consequences for one's political views. Morality and politics will fuse into **moral politics**; hence the title of Lakoff's book: *Moral politics.*

This analysis of metaphor in American politics shows very clearly that metaphor is at the heart of society and culture. To think of metaphor as merely a linguistic device is to ignore its pervasive role in what we take to be core cultural and social phenomena.

6. Image-schemas: understanding literature

Much of our knowledge is not propositional but image-schematic. Johnson defines image schemas in the following way: An image schema is "a recurring, dynamic pattern of our perceptual interactions and motor programs that gives coherence to our experience" (Johnson 1987, xix). Image schemas function as the foundation of thought. To demonstrate what image schemas are, how they emerge, and how they perform their function in structuring thought, let us consider some examples.

First, let us take the CONTAINER image schema (Lakoff 1987). The bodily experiences that motivate the existence of this schema are varied, but they can be reduced to two general types of experience. On the one hand, we have bodies that are containers (of body organs, fluids, etc.). On the other hand, not only are our bodies containers, but we function as container-objects in other larger objects. Thus, these larger objects, like buildings, rooms, contain us. The CONTAINER image schema has the following structural elements: INTERIOR, BOUNDARY, and EXTERIOR. The basic logic of the schema can be given as follows: Everything is either

inside the container or outside it. Moreover, if B is in A, and C is in B, then one can conclude that C is in A. Thus the CONTAINER schema imposes a certain logic on us. There are many metaphors that are based on the CONTAINER schema. For example, STATES ARE CONTAINERS, PERSONAL RELATIONSHIPS ARE CONTAINERS, and THE VISUAL FIELD IS A CONTAINER. This is why we can be **in** trouble, we are **in** love, and things come **into** view.

Second, let us look at the SOURCE–PATH–GOAL schema (Lakoff 1987). The bodily experience that motivates the schema is the most common (and unconscious) type of experience: Whenever we move, we move **from** a place **to** another place **along** a sequence of continuous locations. The structural elements include SOURCE, PATH, GOAL (DESTINATION), and DIRECTION. The basic logic is hardly noticeable: If you go from A to B, then you must pass through each intermediate point connecting A and B. Again, several metaphors are based on this image schema. Take the complex metaphor of LIFE IS A JOURNEY, which assumes the SOURCE–PATH–GOAL schema. A mapping (and a submetaphor) of this complex metaphor is PURPOSES ARE DESTINATIONS, in which we also have a SOURCE, a PATH, and a GOAL. As a matter of fact, it is this second primary metaphor that provides some of the motivation for the more complex one. Complex events are also commonly viewed as involving an initial state—SOURCE, intermediate stages—PATHS, and a final state—GOAL.

Third, consider now the image schema of FORCE, as studied extensively by Talmy (1988; 2000). A large portion of our utterances about the world can be accounted for by making reference to such notions as agonist, antagonist, force tendency of agonist, etc. Kövecses (2000) applies this conceptual machinery to the study of the folk theory of the mind; in particular to such components of the mind as emotion, morality, and rational thought. Based on the study of the language we use to talk about the mind, he suggests that all three components can be described in force dynamic terms. In other words, the workings of the mind can be seen as interactions of forces. The rational "self–agonist" undergoes change in emotion, the rational "self–agonist" withstands change in morality, and the rational "self–antagonist" causes change in thought. What is of any interest in such a description? After all, everyone knows that emotion is different from morality and that rational thought is different from both. But this is not the point. What is remarkable about the analysis in terms of force dynamics is that it shows that the basic cognitive "architecture"

of emotion, morality, and rational thought is so much alike. They are all constituted force dynamically, and this shows that "superficially" very different domains, or faculties, of the folk theory of the mind have a deep underlying similarity on which the many obvious differences are based.

It is an interesting feature of thought that we can conceptualize domains and situations by means of not just one but several image schemas. For example, force dynamic image schemas can interact with perceptual image schemas: We can have a FORCE inside a CONTAINER. Forces inside containers are fairly common as metaphorical ways of conceptualizing the mind. It was shown by Kövecses (1990) that this was a major metaphor used by Sigmund Freud in his psychoanalytic theory.

It is quite remarkable that we can find something similar in the case of the image schematic understanding of stories. That stories and discourse in general are commonly understood by means of image schemas was noticed in the cognitive linguistic literature, for example, by Palmer (1996). Much subsequent work also relies on this general idea (see, for example, Kimmel 2001).

As a demonstration of the role of image schemas in understanding and remembering a plot, Michael Kimmel uses Joseph Conrad's novel *Heart of Darkness*. Kimmel describes the gist of the story as follows:

(16) In the novel, Marlow, a seaman and wanderer, recounts a steamboat expedition into deep African territory in search of the enigmatic Mr. Kurtz who is the company's agent at the 'Inner Station', a trading outpost. The story is situated around the turn from the 19th to the 20th century in the Congo, which was at that time a private property of the Belgian King Léopold and marked by rampant forced labor and vicious exploitation of the natives. The narrative's thrust goes quite literally towards Kurtz who is the goal of the gradual penetration into a strange, dangerous and unfathomable territory. Kurtz has imposed a surreal order of terror and charisma among the natives. He is a man of captivating and demonic force who has signed a Faustian pact and is being worshipped as a god, yet troubled. When Marlow finds him, he is on the verge of madness and death and experiencing great inner turmoil. Marlow himself is changed in the struggle to comprehend his experience with this once exceptional and now tormented man who has looked into his own nature, the dark side of his passions. Having succumbed to alien and yet strangely familiar forces in the zone of proximity between culturalized humanity and an archaic 'Other', Kurtz dies with the words "The horror! The horror!" on his lips. Back from his experience Marlow visits Kurtz's fiancée in Brussels, but conceals the truth about his fall from grace and his last words from her. It is apparent that while the tale's overall structure is that of a literal journey, metaphorically it is a journey to the limits of the human soul, a double-entendre that becomes evident in the very title.

Kimmel suggests that "the most fundamental macrostructural function of image schemas is the creation by readers of a condensed representation for use in plot recall." That is to say, as we read the text, we try to construct a network of image schemas that are based on the description of the literal journey, the various force metaphors used, and the many symbolic meanings that transpire from the novel. Kimmel proposes a diagrammatic representation of our global understanding of the text as in Fig. 1.

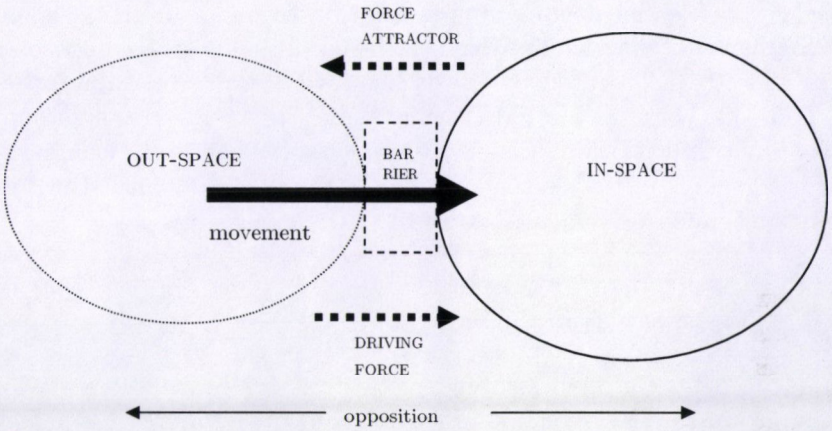

Fig. 1

The line with an arrow image-schematically represents the literal journey into Africa. The circles image-schematically represent Europe and Africa, respectively. Europe is an "out-space" and Africa is an "in-space". Superimposed on the image schemas of container and source–path–goal, we find a force-dynamic schema represented by opposing bold arrows. Marlow is both metaphorically driven and attracted by certain forces: the forces of intellectual curiosity and knowledge, on the one hand, and the forces of sensuality and passion, on the other.

We cannot present Kimmel's intricate system here. The main point of this brief demonstration was twofold: One is to show that image schemas may have an important function in remembering and comprehending story plots. The second is to indicate that image schemas may be superimposed on each other and may thus form complex structures that we use to make sense of complex sets of events.

7. Figure–ground alignment: grammatical structure

Figure–ground relations have been studied mostly by cognitive psychologists. What is called "figure–ground alignment" here is important if we want to account for how we talk about spatial relations in language. Language about spatial relations is pervasive in communication. We talk about how one entity is positioned with respect to another entity, how an entity moves in relation to another entity, and so on. For example, when we say that "The bus is coming", we have a figure, the bus, that is presented by the sentence as moving in relation to the ground, the speaker. The cognitive linguist who studied this area of the interface between language and cognition extensively was Leonard Talmy (see Talmy 2000).

To begin with, we should first note that figure–ground alignment is an asymmetrical relation. Let us assume that we have *bike* as figure and *house* as ground in the sentences below. Whereas one can naturally say (17a), it is much less natural to say (17b):

(17) (a) The bike is near the house.
(b) ??The house is near the bike.

This is because the figure should come first in the sentence, followed by the ground. The reversal of figure–ground alignment in the second sentence makes the sentence sound odd.

The same applies to the following pair of sentences:

(18) (a) The fly is on the ceiling. (figure–ground)
(b) *The ceiling is above the fly. (ground–figure)

Why are the *bike* and the *fly* the figure and the *house* and the *ceiling* the ground? Talmy (2000, 315–6) characterizes figure and ground in the following way:

(19)

Figure:	*Ground:*
smaller	larger
more mobile	more stationary
structurally simpler	structurally more complex
more salient	more backgrounded
more recently in awareness	earlier on scene/in memory
location less known	location more known

These characteristics do not all have to be present in particular cases and we often decide on what the figure and ground will be on the basis of just one or two situationally important features. In the examples above, it is clear that the bike and the flea are smaller and more mobile than the house and the ceiling, respectively. This makes them good figures in the given context. In other contexts, however, they may become grounds.

The two examples we have seen so far involve static relations between two entities (bike-near-house and flea-on-ceiling). However, as our characterization of spatial relations above suggests, spatial relations also involve motion events, in which one entity moves in relation to another. This is exemplified by (20):

(20) She went into the house.

In this case, we have a motion event, where *she* is the figure and *house* is the ground. The figure (*she*) moves in relation to the ground (*house*).

In addition to its application to static and dynamic spatial relations, figure–ground alignment can be seen at work in grammatical structure as well. Complex sentences can be construed in terms of figure–ground alignment; the main clause corresponds to the figure, while the subordinate clause to the ground. Let us take the following sentences from Croft–Cruse (2004, 57):

(21) (a) I read while she sewed.

(b) I read and she sewed.

The main clause *I read* is the figure and the subordinate clause *while she sewed* is the ground. The relation between the two events is construed asymmetrically in the first sentence, but symmetrically in the second. This means that the reading event is viewed as occurring against the background of the sewing event. However, given the second sentence, no such relation is construed between the two events, which are seen as occurring independently of each other. This latter construal results in a coordinated syntactic construction (the two clauses connected by *and*).

In other cases, the two events can only be construed as an asymmetrical figure–ground relation. Since dreaming is contingent on sleeping but sleeping is not contingent on dreaming (Talmy 2000, 325), we can have (22a) but not (22b):

(22) (a) He dreamed while he slept.
(b) *He slept while he dreamed.

Moreover, the two events cannot be conceived as being coextensive and coordinated, either. Thus the sentence in (23) sounds odd.

(23) */?He dreamed and he slept

This is because the two events are inherently causally related (dreaming being contingent on sleeping), and thus a non-causal conceptualization (i.e., as symmetrical figure and ground) is not possible in a natural way.

8. Mental spaces: semantic anomaly

The theory of mental spaces is a key idea in cognitive linguistic approaches to the understanding of how people make sense of utterances in the course of on-line communication. To get an idea of what mental spaces are, consider as an example the so-called "picture noun" context, as made explicit by the second sentence below (Fauconnier 1997):

(24) (a) The girl with blue eyes has green eyes.
(b) In the picture, the girl with blue eyes has green eyes.

There are two mental spaces here: the mental space of reality, as we represent it to ourselves and the mental space of the picture, as we perceive it. The mental space of reality is the base space and the mental space of the picture is a "model" space (or picture space). To understand the sentence, the mappings go from the base space to the picture space. If we represent the girl as x, the eyes as y, and the blue color of the eyes as z, the mappings are as follows:

(25) Base: → Picture:
girl (x) → girl (x')
eyes (y) → eyes (y')

However, the blue color (z) of x's eyes does not correspond to the green color of x''s eyes. In other words:

(26) blue (z) $\nrightarrow$ green (z')

This says that the blue color of the girl's eyes in the base space does not correspond to the green color of the girl's eyes in the picture space. But it is precisely what the sentence states: that the girl who has blue eyes has green eyes in the picture. Thus we get a contradiction. How can we explain it by means of mental space theory?

We can account for the apparent contradiction if we assume that there are two mental spaces here: a base space and a picture space. In the base space, we have the girl with blue eyes, and in the picture space we have the girl with green eyes. The girl with blue eyes in the base space can be said to have green eyes in the picture space because we can refer to a counterpart of an element by means of the description of that element in another space (i.e., in the base space where the description is *the girl with blue eyes*) (Fauconnier 1997). This provides an elegant solution to a problem that would be difficult to handle for formal theories of language.

9. Conceptual integration: creativity in linguistic and conceptual structure and in everyday activities

To see what conceptual integration, or blending, involves, we can take an example from a well known metaphor ANGER IS A HOT FLUID IN A CONTAINER (see Kövecses 1986; 1990; Lakoff–Kövecses 1987; Lakoff 1987). This metaphor is constituted by the mappings "container → body", "hot fluid → anger", "degrees of heat → degrees of intensity", etc. However, there is more going on than just having straightforward mappings from source to target in one of the examples of this metaphor:

(27) God, he was so mad I could see the smoke coming out of his ears.

The example was reanalyzed by Fauconnier and Turner (2002), who point out that in this case an element of the source is blended with an element of the target. There are no ears in the source and there is no smoke in the target, but in the blend both are present at the same time as *smoke coming out of his ears.* A frame is created with smoke and ears in it that is novel with respect to both the source frame and the target frame.

What happens here is that an angry person's head with the ears becomes the container in the source, and the smoke (steam) in the source will be seen as coming out of the ears (and not through the orifices of

the container). This is a true conceptual fusion of certain elements of both source and target in the blend. The blend goes beyond simply instantiating existing frame roles in the source with participants in the target frame, as is often the case with single-scope integration networks (Fauconnier–Turner 2002).

Given the new emergent structure, the blend can be developed further. One can say, for example:

(28) God, was he ever mad. I could see the smoke coming out of his ears—I thought his hat would catch fire!

To understand this sentence, we need the "smoke coming out of one's ears" frame, plus knowledge based on how intensity is conceptualized in the network (see Kövecses, in preparation). A submapping of the ANGER IS HEAT metaphor is INTENSITY OF EMOTION IS DEGREE OF HEAT. One of the entailments of this metaphor is that a high degree of heat may cause fire (corresponding to "intense anger may cause a dangerous social situation"). But how does "hat" get into the blend? The fact that it does shows the almost infinite creativity of blends: we can develop them further and further, bringing about new conceptualizations that depend on old ones, as well as the application of systematic cognitive processes. In this particular case, the "hat" emerges as we run the previous blend with the "smoke coming out of one's ears". The head-container with the ears metonymically evokes the hat, which is typically worn on the head. Due to the entailment of the INTENSITY IS HEAT metaphor ("high degree of heat may cause fire"), the hat can be seen as catching fire. This would indicate an overall increase in the intensity in the person's anger. We can represent all this diagrammatically as in Fig. 2 (taken from Kövecses, in preparation).

Although this example may sound like a highly creative blend, Fauconnier and Turner emphasize that blending just as commonly involves conventionalized cases and can go into the heart of grammar (to use a theory-dependent metaphor).

As another example of conceptual integration, let us now take what is known as the "caused motion" construction, analyzed in detail by Goldberg (1995) in a cognitive linguistic framework. A general characterization of the caused motion construction can be given along the following lines. Semantically, the construction can be described in the following way: An agent does something, and as a result an object moves. As a prototypical example of this situation, we can take the sentence in (29):

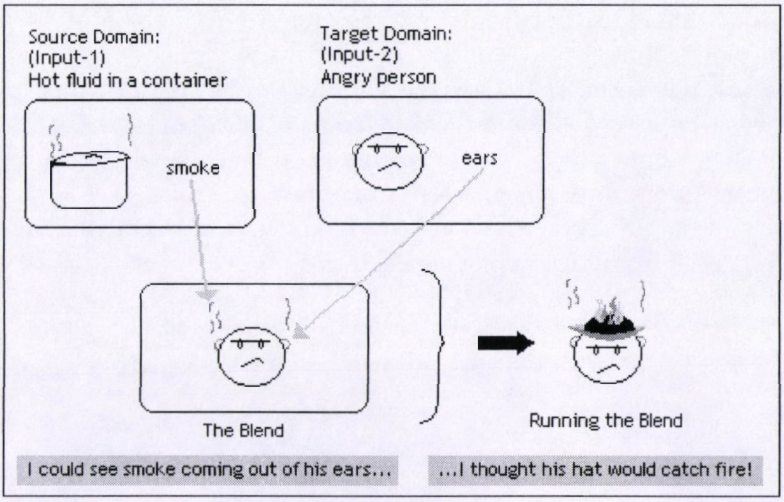

Fig. 2

(29) Jack threw the ball over the fence.

In this sentence, Jack is the agent that throws the ball (does something), and the action causes (produces a result) the ball to move over the fence (the object moves).

The form of the sentence can be given as NP–V–NP–PP, where *Jack* is the first NP, *throw* is the V, *the ball* is the second NP, and *over the fence* is the PP (prepositional phrase).

It is clear that in the prototypical case the verb must be a transitive verb, such as *throw, kick, toss, push, fling, flip*, and many others. This is the characterization of the prototype of the construction. But there are many other cases, including:

(30) (a) She sneezed the napkin off the table.
(b) I walked him to the door.
(c) I'll talk you through the procedure.
(d) They teased him out of his senses.
(e) I read him to sleep.
(f) They let Bill into the room.
(g) We ordered them out of the house.

The major difference between these examples and the prototype of the construction is that the latter verbs are either not transitive (*sneeze, talk*) or they are not verbs that describe actions as a result of which objects are moved (*sneeze, walk, talk, tease, read, let, order*).

Thus, we have the following problem: Which verbs can be used in this construction, and which ones cannot? Fauconnier (1997) proposes that it is best to analyze the construction as a blend. On this view, the blend emerges from two input spaces:

(31) (a) The basic construction that is found in many languages:

NP	V	NP	PP
a	*d*	*b*	*c*
John	threw	ball	to me

(b) A "causal sequence":
[[a' ACTS] CAUSES [b' MOVE to c']]

There is a straightforward set of cross-space mappings between the two input spaces that can be given as follows:

(32) Mappings between input1 and input2:
$a \rightarrow a'$
$b \rightarrow b'$
$c \rightarrow c'$

In the basic, that is, prototypical, construction, the verb has all three elements in one: ACT, CAUSE, MOVE. For example, throwing involves a particular kind of action (ACT), the moving of an object (MOVE), and the causal link between the throwing action and the moving of the object (CAUSE). For this reason, *d* (e.g., *throw*) in the first input space may map to any one of these elements in the second input, which is represented as a set of mappings in (33):

(33) $d \rightarrow$ ACT
$d \rightarrow$ MOVE
$d \rightarrow$ CAUSE

Thus we get three different blends: *d* with ACT, *d* with MOVE, or *d* with CAUSE. Fauconnier (1997, 172–5) illustrates these blends with the following examples:

(34) $d \rightarrow$ ACT: The sergeant waved the tanks into the compound.
$d \rightarrow$ MOVE: Junior sped the car around the Christmas tree.
$d \rightarrow$ CAUSE: The sergeant let the tanks into the compound.

The three different blends inherit the syntactic structure of input1. This means that we have the same syntactic pattern in all three cases: NP V NP PP. However, their conceptual structure derives from input2, in which a' does something that causes b' to move to c'. As we saw, in the prototypical case the doing, the cause, and the moving are all present in one verb (such as *throw*), but in many non-prototypical cases (such as *wave, speed, let*) the complex d verb maps to and forms a blend with only a single element.

Although there is no syntactic innovation in this particular blended construction (the blend inherits the syntactic structure of input1), there can be semantic innovation. Verbs that can be mapped to either ACT, MOVE, or CAUSE can appear in the construction. Fauconnier (1997, 176) mentions some innovative examples of the construction:

(35) (a) The psychic will think your husband into another galaxy.
(b) They prayed the boys home.

They verbs *think* and *pray* map to the ACT element, but leave the CAUSE and MOVE elements unspecified. Which particular verbs can be used in the construction in novel ways is an open question. A factor that may play a role is the issue of which actions are situationally interpretable as causing the motion in question. For example, in the case of *pray* (describing missing boys in a news item) the action of praying is situationally interpretable as an immediate cause of the motion.

But the construction of blended spaces does not occur only in the case of highly abstract domains such as anger and syntax. We routinely construct blended spaces in the most mundane activities we perform. As an example, consider one such mundane activity, "trashcan basketball", originally proposed and analyzed by Coulson (2000). Let us look at some of the features that make this game a blend. (The description below is based on Fauconnier–Turner 2002.)

Imagine that you are tired and frustrated with studying and doing homework, and, to have some fun, instead of simply dropping a piece of waste paper into the trashcan you crumple up the paper into a spherical shape, take up a basketball player's position, carefully take aim of the trashcan, move your arm, wrist and hand like a basketball player in the

course of a shot, slowly release the crumpled up paper, which travels majestically through the air and lands in the trashcan. Your roommate or friend sees this, gets up from the chair, and does the same thing with another piece of paper. He misses the trashcan, and comments: "You're one up." Soon you have a game going. This is trashcan basketball.

It is clear that the game is composed of two domains: basketball and the disposing of paper into a wastebasket. In this case, the input spaces are structured by the frame (domain) of basketball and the frame (domain) of disposing waste paper. There are some obvious mappings between the two domains: the person disposing the paper corresponds to a basketball player, the crumpled up paper to the ball, the wastebasket to the basket, and so forth. This structure looks like a conceptual metaphor, in which we have the game of basketball structured by disposing paper into the wastebasket. But there is more than that to trashcan basketball.

First, how can we explain the mappings between the two domains? On what basis do the mappings emerge? In the theory of conceptual integration, in addition to the two input spaces (source and target) we used in metaphor theory we assume the existence of a generic space which contains what is shared by the source and target. In the case of trashcan basketball, it is the putting of a vaguely spherical object into a receptacle, or container. This generic-level structure is shared by disposing paper and basketball. On the basis of this generic-level structure, we can easily construct the mappings between the two activities.

Second, in addition to the generic space and the two input spaces we have a blended space: This is trashcan basketball. In it, we have a crumpled-up-paper-basketball, bored and frustrated students as basketball players, a wastepaper-basketball basket, throwing the wastepaper-basketball in basketball fashion, and so on. All of these emerge from the projection of certain elements in the input spaces to the blended space and the fusion of the elements in that space. Moreover, we also have elements in the blend that derive from one of the inputs but are not fused with other elements. One example of this is the counting of shots and keeping score that comes from the basketball domain and is used in the blend.

Third, it is not the case that everything that we find counterpart for in the two inputs is projected into the blend. Take placing wastepaper into the wastepaper basket and the corresponding element of placing the ball into the hoop in basketball. Although the two elements match each other perfectly, they are not projected into the blend. In trashcan basketball, we do not have the simple placing of the crumpled-up-paper-

basketball into the wastebasket in the blended game. This action would be too easy for the purposes of playing the game. In other words, as soon as we begin to play the new game that is based on some of the mappings between the inputs, new structure emerges. This is called "emergent structure" in the blend. In this particular example, a certain move that has counterparts in the inputs is left out of the game. In other examples, the players in the blend will learn that they have to adjust the nature, intensity, etc. of their movements due to the physical environment and the social interaction in the blend. For example, because of the lightness of the "new ball" in the blend, they have to adjust the strength of their arm movements in throwing the "ball" into the "basket". The structure of the network can be given as in Fig. 3 (taken from Kövecses, in preparation).

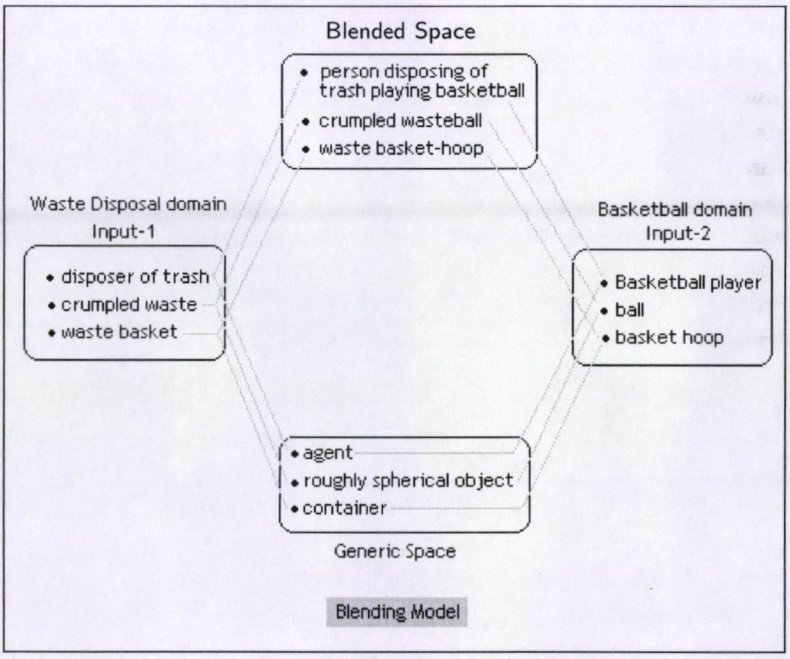

Fig. 3

The main point of this example is that blends are not esoteric abstract structures. They can be found in how we make sense of our emotions and the structure of the sentences we use but also in how we construct mundane activities such as trashcan basketball. The conceptual apparatus we

need to account for all the examples is the same; we need input spaces, generic and blended spaces, mappings between the spaces, projections from the input spaces to the blend, and so forth.

10. Conclusions

In this paper, three general issues were examined. First, what cognitive processes play a role in making sense of the world around us? Second, how do these cognitive processes contribute to our understanding of issues in language? Third, how do the same cognitive processes provide an account of a wide range of social and cultural phenomena?

To begin with, we have found that we make use of a relatively small number of cognitive processes in making sense of our experience. We categorize the world, organize our knowledge into frames, we make use of within-frame mappings (metonymy) and cross-frame mappings (metaphor), build image schemas from bodily experience and apply these to what we experience, divide our experience into figures and grounds, set up mental spaces and further mappings between them in the on-line process of understanding, and have the ability to skillfully and creatively integrate conceptual materials from the mental spaces that we set up. We do not do most of this in a conscious way; our cognitive system operates unconsciously most of the time. It is these and some additional cognitive processes not discussed in this paper that participate in our unconscious meaning-making activity.

With the help of these cognitive processes we can account for many (or perhaps most) of the phenomena of meaning in language in a coherent fashion. The theory that emerges from the application of these cognitive processes to our understanding of meaning in language will be very different from other theories of language. Most importantly, the theory will be a theory of meaning, and not one of form. On this view, even highly abstract and schematic forms (such as N, V, NP V NP, or NP V NP PP) are seen as having meaning; as a matter of fact, the only justification of the existence of such abstract and schematic forms is their role in the expression and understanding of meaning as being part of "symbolic units", which consist of combinations of meaning and form (Langacker 1987). On the cognitive linguistic view, the scientific study of language cannot be the study of the manipulation of such abstract and schematic forms (i.e., syntax); the only legitimate and scientific goal in the study of

language is the study of **meaning** in language (including the meaning of abstract symbolic units) and how the cognitive processes discussed above play a role in this.

But most importantly for the purposes of this paper, we have seen that the same cognitive processes help us make sense of a wide range of social and cultural phenomena. Understanding the nature of debates about art, the issue of motherhood, setting up ideals and stereotypes to function in the world, the structure of political thought, the understanding of literature, and others discussed in the paper are only some of the issues that we can make sense of by making use of such cognitive processes. The cognitive processes described by cognitive linguistics are not merely ways of accounting for language; they are ways of accounting for many aspects of our social and cultural reality. (Such a suggestion is in the spirit of Turner (2001), who discusses the issue in relation to conceptual integration, and Kövecses (2005), who discusses it in relation to conceptual metaphor.)

As we have seen, our main meaning-making organ, the mind/brain, is shaped by both bodily and social/cultural experience. Image schemas, correlation-based metaphors, and the like arise from bodily functioning and are at the same time imbued by culture (e.g., by applying alternative frames to the "same" aspect of reality). Both the mind/brain and its product, meaning, are embodied and culture-dependent at the same time (see Kövecses (2005)). It is the goal of the cognitive linguistic enterprise to characterize the functioning of such an embodied and cultured mind in relation to language and beyond it.

Given such a wide scope of the field, we need to ask whether the name "cognitive linguistics" is an appropriate one. For reasons mentioned in the introduction, I believe it is not. Perhaps terms such as "cognitive social science" or "cognitive semiotics" would be more appropriate. They would reflect more faithfully both the nature ("cognitive") and the scope of the enterprise ("social", "semiotics"). By accepting such designations for the field, we would indicate that the study of language, and especially meaning in language, is just a part of a more general meaning-making activity that we as human beings are all engaged in — no matter which language we speak and which society we live in. In other words, after working out all the connections among the components of the meaning-making process (including embodiment, language, mind, and culture) in a much more detailed and comprehensive way than I have been able to do in this paper, we might arrive at a "unified science" of meaning-making

that would allow us to make sense of, say, semantic anomaly and trashcan basketball by utilizing the same cognitive apparatus in human beings.

References

Andor, József 1985. On the psychological relevance of frames. In: Quaderni di Semantica 6 : 212–21.

Barcelona, Antonio (ed.) 2000. Metaphor and metonymy at the crossroads. Mouton de Gruyter, Berlin.

Brdar, Mario – Rita Brdar-Szabó 2003. Metonymic coding of linguistic action in English, Croatian and Hungarian. In: Panther – Thornburg (2003, 241–6).

Brdar-Szabó, Rita – Mario Brdar 2003. The MANNER FOR ACTIVITY metonymy across domains and languages. In: Jezikoslovlje 4 : 43–69.

Coulson, Seana 2000. Semantic leaps: Frame-shifting and conceptual blending in meaning construction. Cambridge University Press, Cambridge.

Croft, William – Alan Cruse 2004. Cognitive linguistics. Cambridge University Press, Cambridge.

Dirven, René – Ralph Pörings 2002. Metaphor and metonymy in comparison and contrast. Mouton de Gruyter, Berlin.

Encyclopedia Britannica Ready Reference 2003. Version on Dell computers.

Fauconnier, Gilles 1997. Mappings in language and thought. Cambridge University Press, Cambridge.

Fauconnier, Gilles – Mark Turner 2002. The way we think. Basic Books, New York.

Fillmore, Charles 1975. An alternative to checklist theories of meaning. In: C. Cogen (ed.): Proceedings of the First Annual Meeting of the Berkeley Linguistic Society, 123–31. BLS, Berkeley, CA.

Fillmore, Charles 1982. Frame semantics. In: I-S. Yang (ed.): Linguistics in the morning calm, 111–37. The Linguistic Society of Korea, Hanshin.

Gallese, Vittorio – George Lakoff 2003. The brain's concepts: The role of the sensory-motor system in conceptual structure. Paper submitted to Cognitive Neuropsychology.

Gentner, Dedre 1983. Structure-mapping: A theoretical framework for analogy. In: Cognitive Science 7 : 155–70.

Gibbs, Raymond – Dinara Beitel – Michael Harrington – Paul Sanders 1995. Taking a stand on the meanings of stand: bodily experience as motivation for polysemy. In: Journal of Semantics 11 : 231–51.

Glucksberg, Sam – Boaz Keysar 1993. How metaphors work. In: A. Ortony (ed.): Metaphor and thought (Second edition), 401–24. Cambridge University Press, Cambridge.

Goldberg, Adele 1995. Constructions. The University of Chicago Press, Chicago.

Grady, Joseph 1997. THEORIES ARE BUILDING revisited. In: Cognitive Linguistics 8 : 267–90.

Holyoak, Keith – Paul Thagard 1996. Mental leaps: Analogy in creative thought. MIT Press, Cambridge MA.

Johnson, Mark 1987. The body in the mind. The University of Chicago Press, Chicago.

Kimmel, Michael 2001. Metaphor, imagery, and culture. Spatialized ontologies, mental tools, and multimedia in the making. Doctoral dissertation, University of Vienna.

Kövecses, Zoltán 1986. Metaphors of anger, pride, and love. John Benjamins, Amsterdam.

Kövecses, Zoltán 1990. Emotion concepts. Springer-Verlag, Berlin & New York.

Kövecses, Zoltán 2000. Metaphor and emotion. Cambridge University Press, Cambridge.

Kövecses, Zoltán 2002. Metaphor. A practical introduction. Oxford University Press, Oxford.

Kövecses, Zoltán 2005. Metaphor in culture. Universality and variation. Cambridge University Press, Cambridge.

Kövecses, Zoltán in preparation. Language, mind, and culture: An introduction. Oxford University Press, Oxford.

Kövecses, Zoltán – Günter Radden 1998. Metonymy: Developing a cognitive linguistic view. In: Cognitive Linguistics 9–7 : 37–77.

Lakoff, George 1987. Women, fire, and dangerous things. Chicago, The University of Chicago Press.

Lakoff, George 1996. Moral politics. Chicago, The University of Chicago Press.

Lakoff, George – Mark Johnson 1980. Metaphors we live by. Chicago, The University of Chicago Press.

Lakoff, George – Zoltán Kövecses 1987. The cognitive model of anger inherent in American English. In: D. Holland – N. Quinn (eds): Cultural models in language and thought, 195–221. Cambridge University Press, Cambridge.

Langacker, Ronald 1987. Foundations of cognitive grammar. Theoretical prerequisites. Vol. 1. Stanford University Press, Stanford.

Panther, Uwe-Klaus – Günter Radden (eds) 1999. Metonymy in language and thought. Amsterdam, John Benjamins.

Panther, Uwe-Klaus – Linda Thornburg (eds) 2003. Metonymy and pragmatic inferencing. Amsterdam, John Benjamins.

Radden, Günter – Zoltán Kövecses 1999. Towards a theory of metonymy. In: Panther – Radden (1999, 17–59).

Rosch, Eleanor 1978. Principles of categorization. In: Eleanor Rosch – B.B. Lloyd (eds): Cognition and categorization, 27–48. Lawrence Erlbaum, Hillsdale, NJ.

Ruiz de Mendoza Ibanez, Francesco 2000. The role of mappings and domains in understanding metonymy. In: Barcelona (2000, 109–32).

Schank, Robert – Robert Abelson 1977. Scripts, plans, goals, and understanding. Lawrence Erlbaum, Hillsdale, NJ.

Talmy, Leonard 1988. Force dynamics in language and cognition. In: Cognitive Science 12 : 49–100.

Talmy, Leonard 2000. Toward a cognitive semantics. Vol. 1. MIT Press, Cambridge MA.

Taylor, John 1989. Linguistic categorization. Clarendon Press, Taylor, John 1989.

Taylor, John 2003. Cognitive grammar. Oxford University Press, Oxford.

Turner, Mark 2001. Cognitive dimensions of social science. Oxford University Press, Oxford.

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METAPHOR- AND METONYMY-BASED COMPOUNDS IN ENGLISH: A COGNITIVE LINGUISTIC APPROACH*

RÉKA BENCZES

Abstract

The paper makes the following novel claims: (1) the semantics of noun–noun compounds which is activated by metaphor and/or metonymy (often termed as "exocentric" compounds in linguistics and generally regarded as semantically opaque) can be accounted for with the help of conceptual metaphor and metonymy theory; (2) there are regular patterns of metaphor- and metonymy-based compounds, depending on which constituent is affected by conceptual metaphor and/or metonymy. In the second part of the paper I look at a subtype of metaphor- and metonymy-based noun–noun compounds, where the simultaneous activation of both metaphor and metonymy affects the meaning, and give an account of the productive patterns that underlie this type.

1. Introduction: the problematic nature of exocentric compounds

Noun–noun compounds are a highly intriguing set of linguistic phenomena. Not only do they form the largest group of compounds in English (Algeo 1991),[1] but children learn to produce this type of compound the earliest, from around the age of two (Clark 1981). However, what is most remarkable about these compounds is the diversity of semantic relationships that can exist between the two components on the one hand, and between the individual elements and the compound as a whole on the other. Nevertheless, however diverse the semantics of noun–noun

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[1] A fifty-year-long research into the emergence of new words in the United States (Algeo, *op.cit.*) has managed to shed some light on contemporary word formation patterns. According to the data, compounding is the most productive word formation process: 68% of the new expressions were grouped into that category. More interestingly, 90% of the compounds were nouns.

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combinations may be, many linguists have attempted to systematise the constraints that apply in their creation and interpretation (see for example Adams 1973; Downing 1977; Jespersen 1954; Levi 1978; Marchand 1960; Ryder 1994; Warren 1978).

The most traditional and pervasive semantic classification of compounds used in linguistics is based upon the work of Bloomfield (1933), who suggested that compounds fall into two main groups. In endocentric constructions, the compound is the hyponym of the head element: *apple tree* is a kind of tree. In the case of exocentric or "headless" constructions, however, the compound is not a hyponym of the head element, and in the majority of cases there is some sort of metaphor or metonymy at work in the meaning of the compound. For example, *blue-stocking* does not denote a kind of stocking but refers to a well-educated woman. While the terms endocentric and exocentric are often used in linguistics even today (see for e.g., Adams 2001; Kiefer 1998), there are two very general—and serious—problems regarding exocentric constructions: (1) linguists do not agree as to what sort of constructions fall under the umbrella term of "exocentric compounds"; and (2) linguistic literature has a strong tendency to mention exocentric combinations only peripherally (if they are mentioned at all), and views these constructions as exceptional cases that do not follow normal and productive compound-forming patterns.

1.1. What sort of compounds should we consider as exocentric?

If one leafs through a number of works on English morphology, it becomes clear very quickly that there is no straightforward answer to this question. There is chaos in the literature regarding the definitional criteria for semantically exocentric compounds; descriptivists such as Bloomfield (1933), Jespersen (1954) and Marchand (1960), for example, limited their investigation to select classes of various kinds of metonymy-based noun–noun combinations, and ignored metaphor-based constructions completely. In her analysis of the semantics of noun–noun combinations, Adams (1973) does make reference to "exocentric" compounds (though marginally); these are mostly constructions that are both metaphor- and metonymy-based, such as *butterfingers*.[2] In her more recent

[2] Adams (*op.cit.*) does not specifically claim that *butterfingers* is a compound based on both metaphor and metonymy, yet in my view, the simultaneous activation of both cognitive devices takes place in the interpretation of the compound's

work, Adams (2001) claims that semantically exocentric constructions are small in number and are formed on the basis of three patterns: (1) the relation between the elements is similar to that between a verb and its complement, as in *pickpocket*;[3] (2) the elements are a combination of adjective and noun as in *highbrow*; and (3) the elements are a combination of noun and noun, as in *spoonbill.* Adams' study can be regarded as a simplification of the problem: in her understanding, the various types of exocentric compounds can be distinguished on the basis of their syntax and no further explanation is provided on the semantics of these constructions—which is in fact the most exciting question concerning exocentric compounds.

To give a generativist example as well, Levi (1978) in her far-reaching work on nominal compounds, bases her theory[4] upon endocentric compounds, but takes a look at exocentric compounds as well. In her view, exocentric compounds are defined as compounds where the referent does not denote a subset of the set of objects denoted by the head noun. She lists three types of exocentric constructions: (1) compounds based on synecdoche such as *blockhead* that describe people and *cottontail* that describe animals; (2) those based on metaphor such as *ladyfinger* (a type of pastry) or *foxglove* (a type of flower); and (3) those which constitute coordinated structures (where neither noun can be taken as a head) such as *secretary-treasurer* or *sofa-bed.* Although Levi extended her interpretation of exocentric compounds to include both metonymic and

meaning: the *fingers* are like *butter* in the sense that everything slips out of one's hands (just as butter is a slippery substance), and the fingers on one's hand stand metonymically for the whole person.

[3] The chaos which exists among the classification of exocentric compounds is well demonstrated by the fact that Carstairs-McCarthy (1992) labels *pickpocket* as a prime example of a *bahuvrihi* type (synecdoche-based compound), which is analysed as a subcategory of exocentric compounds in Marchand (1960). Bauer (1983) also claims that *bahuvrihi* compounds are a type of exocentric compounds—though he extends "exocentric" to include lexicalised metaphor-based compounds as well, such as *monkshood* or *ladysmock* (for various kinds of plants).

[4] Levi claims that all complex nominals are derived by two syntactic processes: predicate nominalization and predicate deletion. In the latter case, the nominal compounds are a result of syntactic transformation in which phrases such as "cake with apples" surface as nominal compounds such as *apple cake.* The semantic relations between the member elements of the compound represent one of the nine recoverably deletable predicates. These predicates are deleted in the surface structure but the interpretation of the compound is made possible by using the reconstituted relative clause.

metaphorical ones, we are once again left with the feeling that such a categorisation (as the previous ones mentioned above) is over-generalised. Surely metaphor and/or metonymy can act upon compounds in a number of ways, depending on which constituent of the compound is affected (or whether the meaning of the compound as a whole is activated by either of the two conceptual devices). What I wish to emphasise here is that the term "exocentric" is not a good candidate to describe compounds whose meaning is based upon metaphor and/or metonymy—for the simple reason that the term "exocentric" is used as a general, collective term to include diverse linguistic phenomena.

1.2. "Exocentric" for exceptionality and quirkiness?

The other major problem with the term "exocentric" is that it implies a degree of quirkiness—the word itself means that the head of the compound falls outside of the construction (hence *exo*). This, naturally, is not the normal state of affairs; it is a general assumption that the majority of English compounds follow the Right-Hand Head rule (Williams 1981)[5] and accordingly are endocentric from both a syntactic and a semantic point of view. There are, of course, exceptions that fail to abide by these suppositions, such as exocentric or left-headed constructions.[6]

The fact that exocentric compounds do exist in English (even though endocentric ones are considered to be the default) might have prompted linguists to look into the nature of these constructions—yet linguistic literature has serious shortcomings on the subject. Either there is utter

[5] This defines the head of a morphologically complex construction as the right-hand member.

[6] As Bauer and Renouf (2001) point out, exocentric or left-headed compounds are regarded as exceptional cases in the sense that there are not too many of them—and this is where many linguistic studies go wrong. Their corpus-based study (coming from the British newspaper *Independent* over a period of ten years) has shown that English neologisms thrive with cases which were taken as borderline formations, such as exocentric compounds. The case in point is that there are plenty of "unexpected trends" (*op.cit.*, 120) in English word formation, and a proper analysis or description of the English language needs to fit these exceptional types in and provide an explanation for them. Bauer and Renouf's observation is highly relevant for the present paper as well, since they address one of the most basic questions in word formation: if a pattern is atypical, does it also mean that it is exceptional? Their paper suggests that the answer to this question is negative.

neglect or exocentric compounds are considered to be special cases that cannot be fitted into a mainstream explanation of compounds. Examples are abundant. Authors such as Downing (1977) and Warren (1978),[7] both of whom have written often-cited monographs on the possible semantic relationships between the constituents of noun–noun combinations, considered endocentric compounds the primary object of their respective studies.[8] Linguists who have included exocentric compounds in their study very often regarded them as exceptional in the sense that they cannot be treated within the same framework as endocentric compounds. Generativists, such as Selkirk (1982), argued for the creation of separate semantic rules in the grammar by which exocentric compounds could be interpreted.[9] Unfortunately no other reference is made to the nature of these rules.[10]

In a textbook summary of generative morphology, Katamba (1993) criticises Selkirk (1982) for introducing the idea of separate semantic rules to interpret exocentric compounds. He argues instead for a simple listing of the meanings. In Katamba's view, both idioms and exocentric compounds are listemes with regard to their semantics—which is opaque.[11]

[7] Warren (*op.cit*), for example, describes metaphor- and/or metonymy-based compounds as "idiosyncratic compounds"—constructions where the semantic relation between the component elements is neither explicit, nor in accordance with established patterns. She claims that such expressions are opaque as to the semantic relation between the constituents, since the hearer cannot "fall back" upon already existing patterns of English compounding.

[8] Ryder (1994) analysed the semantics of noun–noun compounds in elaborate detail from a cognitive linguistic viewpoint—but her study also pertains exclusively to endocentric compounds.

[9] Selkirk devotes only a couple of pages to the idiosyncratic nature of exocentric compounds—due most probably to the fact that the author looks upon these linguistic phenomena as exceptional when she expresses her intent to examine the "few cases of exocentric (nonheaded) compounds in English" (*op.cit.*, 23).

[10] I would like to point out a positive example here as well. One of the strongest criticisms of the transformationalist/generative approach is provided by Botha (1968), who calls attention to the relative abundance of "metaphorical compounds" in the Afrikaans language. The author claims that in constructing an Afrikaans transformational generative grammar of compounds, metaphorical constructions cannot be left unconsidered. Not only does Botha call for a proper linguistic description of such compounds, but he also provides a very compact classification of such constructions.

[11] In his study, Kooij (1968) has also pointed out the existence of so-called idiomatic compounds (his term) whose meanings are very often based upon metaphor. However, he restricts his analysis of compounds to endocentric constructions, claiming

This is the reason why, according to the author, exocentric compound formation is used much less frequently than endocentric compounding in the creation of new words. However, if the semantics of exocentric compounds is opaque then why bother with using them at all? It would be more sensible—following Katamba's line of reasoning—to denote things by using semantically endocentric compounds only. Yet the simple fact that English does have such constructions implies that either English speakers like to invent dim and murky terms when creating a new word for public access or that the meaning of exocentric compounds is not as opaque as it seems.

2. The transparency of semantically "opaque" compounds

Leaving behind the traditional notions of endo- and exocentricity, Dirven and Verspoor (1998) discuss the semantics of compounds from a more flexible perspective: the authors also argue for a cline of transparency on which compounds can be placed on the basis of the transparency of their meaning.[12] At the fully productive (and transparent) end of the continuum, both parts of the compound and the semantic link between them "are unequivocally analysable and hence immediately transparent"

that—even though idiomatic compounds did originally have the same structures as regular, non-idiomatic ones—these have undergone meaning specialisation to such a degree that they cannot be described by the same set of rules, they therefore represent a different type in grammar from non-idiomatic compounds.

[12] The idea of placing compounds on a cline of transparency (instead of having two clear-cut classes of endocentric and exocentric constructions) is not new—see for example Cruse (1991); Fabb (1998); Spencer (2001). In fact, Levi (1978, 63), too, proposed a "continuum of derivational transparency" for compounds. Transparency should not be confused with compositionality (see for instance Allan 1986; Cruse 1991; Fabb 1998; Katamba 1993; Langacker 1987; Matthews 1974; for an overview of the topic see Benczes 2004a), which has been often used to differentiate among phrases and compounds (*black bird* versus *blackbird*). I agree with Langacker (1987; 2000) who claims that linguistic phenomena (including compounds) are more likely to show partial than full compositionality: *blackbird* (meaning a bird species) is partially compositional because, even though the composite meaning is a combination of the meanings of the components, it has undergone a specification of meaning since it refers to a specific type of black bird. In Langacker's view, when a new linguistic expression is coined, it is interpreted with a quite rich contextual and specified meaning, therefore $C \neq [AB]$. As the form gets to be established, some of this extra meaning is retained and that is the reason why most composite expressions (including compounds) have a conventionalised meaning that is more specific than their compositional value.

(*op.cit.*, 60), such as *apple tree*. In the case of partially transparent expressions, the components are still analysable but the semantic link is less apparent and insufficient to see which subcategory the meaning of the compound involves, such as *blackbird*, which does not denote a black type of bird but a bird species. At the other end of the continuum lie non-transparent expressions, which Dirven and Verspoor call "darkened compounds": in these cases, the authors claim, metaphorical or metonymical processes are involved in the meaning of the constructions, such as *red tape*, which does not describe a kind of tape but refers to a long and irritating bureaucratic procedure.

There are two main problems with Dirven and Verspoor's (1998) analysis. First, their definitions of the various degrees of transparency are very vague indeed. When *is* a semantic link "unequivocally analysable" in the case of transparent compounds? Are there certain semantic relations which are more transparent than others? If so, what are these? Needless to say, the problem also arises in the case of partially transparent compounds. When does a transparent compound become partially transparent?[13]

However, the introductory purpose of Dirven and Verspoor's (1998) textbook might offer an excuse for the relative superficiality of their definitions, as the limited space did not allow for in-depth elaborations on the various topics, including the transparency of compounds. Nevertheless, the second problem of their analysis is more serious. The authors state that non-transparent or darkened compounds are metaphorical or metonymical: yet such a claim is at odds with their explanation of *information highway* (metaphorically referring to the internet), which they see as "easily analysable" (*op.cit.*, 60–1) on the basis that the metaphorical meaning of *highway* is linked to the source domain of *traffic* with the target domain *information*, and with the help of our cultural knowledge we know the cultural background to which the word refers. The juxtaposition is the following: if a metaphorical expression is easily analysable indeed, as the authors rightly say, then why should such a compound be placed at the non-transparent end of the continuum? The answer, in my

[13] In my view, partial transparency might involve some sort of meaning specialisation or generalisation, thus *ashtray* is not really a tray, nor a tray for ashes, but a specific kind of 'tray' for cigarette ashes. *Attaché case*, on the other hand, could be an example for a partially transparent compound where generalisation of meaning occurs: it is not a case used by attachés only, but by many people in all sorts of white-collar professions.

view, is that there is no need for us to do so in the first place. If metaphor and metonymy are everyday processes of thought, as Lakoff and Johnson (1980) say they are, then metaphorical and metonymical compounds are just as normal and everyday constructions as nonmetaphorical or non-metonymical ones.[14]

3. What kinds of metaphor- and metonymy-based compounds are there?

Figure 1a (after Langacker 1991, figure 7) shows the highly schematised constructional schema for forming noun–noun compounds in English, where two nouns (denoting different concepts) can be combined into one semantic unit. All the structures and categorizing relationships have the status of units, which are indicated by the boxes. Figure 1b shows how we are able to arrive at the composite expression of *jar lid*, the composite symbolic structure of the combination of [[JAR]/[ʤɑ:]] and [[LID]/[lɪd]], with the application of the noun–noun constructional schema. The assembly of this expression comes from a number of pre-existing units: the constructional schema, the components *jar* and *lid*, and the categorisation of *jar* and *lid* as nouns.

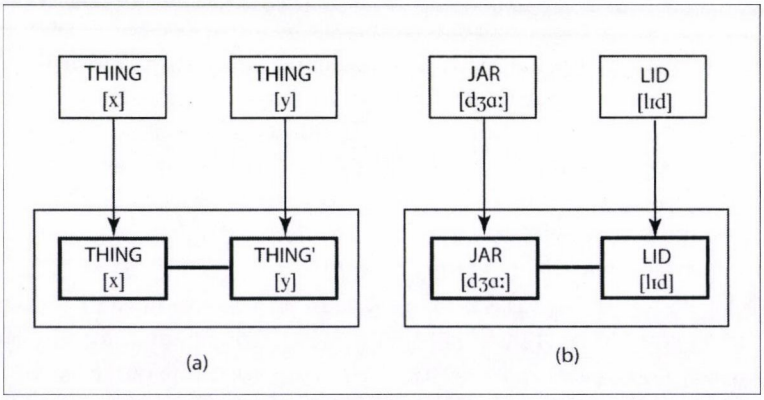

Fig. 1

The constructional schema of noun-noun compounds (a);
and the constructional schema of jar lid (b)
(after Langacker 1991, fig. 7)

[14] See also Benczes (2004a;b; forthcoming) — where I suggest using the term "creative compound" for metaphor- and/or metonymy-based compounds.

Jar lid is an example of a regular pattern in English compounding, a sequence also observable in e.g., *milk carton*, *salad oil*, *door knob*, *pencil eraser*—to name but a few. Phonologically, both *jar* and *lid* are words, while at the semantic pole each is a noun profiling a thing. *Jar* profiles a specific kind of container, while *lid* designates the cover for a container of an unspecified nature. The composite structure *jar lid* consists phonologically of a two-word sequence, while semantically it profiles the cover for a jar in particular. In a construction, the component and composite structures are linked by correspondences—these specify how the components are integrated to form the composite structure (e.g., the semantic correspondences of *jar lid* equate the unspecified container evoked by *lid* to the specific container profiled by *jar*). In a typical construction, one component is schematic with respect to the composite structure as a whole: while both the schematic component and the composite structure construe the scene in the same fashion, particularly in regard to profiling, they differ in the level of specificity: the composite structure is more specific with regard to the thing that it profiles (*jar lid* is more specific than *lid*). In the case of *jar lid*, *lid* will function as the profile determinant, as this is the constituent that construes the same scene as the composite structure (Langacker 2000, 16–8).

Cognitive linguistics claims that the way we construe events or things can also be metaphorical or metonymical (Langacker 1987; 1991; 2000). This implies that profiling can also be affected by conceptual metaphor or metonymy. Therefore, in the case of a noun–noun constructional schema, the modifier element, the profile determinant or the semantic link between the two components can also be influenced by metaphor and metonymy. What this implies then is that there is an inventory of metaphor- and metonymy-based compounds, depending on where metaphor or metonymy acts upon the constructions: the modifier, the profile determinant, the relation between the two constituents of the compound, or the compound as a whole.

By identifying the place where conceptual metaphor or metonymy can act upon the meaning of a noun–noun compound, their systematisation[15] and the analysis of their meaning (within a cognitive linguistic framework) becomes possible. In the second part of the paper I wish to present one subtype of metaphor- and metonymy-based compounds:

[15] For a full, systematic description of the possible patterns underlying English metaphor- and/or metonymy-based noun–noun compounds, see Benczes (2004a).

those whose meaning is influenced by the simultaneous activation of both metaphor and metonymy. I claim that there are regular patterns by which such compounds are formed in English; I have identified four such patterns. After providing a critical overview of previous analyses of metaphor- and metonymy-based compounds, I will give an account of the patterns I have uncovered—I will give examples for all four and will also provide full analyses of the meanings with the help of conceptual metaphor and metonymy theory.[16]

4. The analysis of metaphor- and metonymy-based compounds in linguistic literature

Needless to say, the idea that metaphor and metonymy can simultaneously act upon the meaning of a noun–noun combination is not new; Warren (1992), for instance, discusses (a couple of) compounds where "metaphors within metonymies" and "metonymies within metaphors" are at work. In her view, *hammerhead* ('a stubborn person') is an example of the former, where the hammer metaphorically refers to something hard, and the compound as a whole is a PART FOR WHOLE metonymy[17] (the head is used to refer to the whole person).

Warren (1992) also claims that the compound *jellybean* ('a stupid person') is a further example of a metaphor in a metonymy. She argues that the motivation for this construction is based on the metonymy that somebody has something that is like a jellybean in that it "contains fluff and is egg-shaped" (*op.cit.*, 95). There are numerous idiomatic expressions in English which have a similar meaning as *jellybean*, for example *be bone-headed from the neck up* or *be soft-headed*, which are in some way related to the head (Benczes 2002). It is probable that *jellybean* also

[16] Note that conceptual metaphor and metonymy are not adequate to account for all the various types of metaphor- and/or metonymy-based compounds—I have made extensive use of blending theory for example in the analysis of other types, which I am unable to present here due to lack of space, but see Benczes (2004a;b; forthcoming) for plenty of examples. On the application of blending theory in the analysis of English compounds, see Coulson (2000); Fauconnier–Turner (2002); Sweetser (1999); for an overview see Benczes (2004a). For a concise overview on the cognitive linguistic theory of conceptual metaphor and metonymy see Kövecses (2002).

[17] As is customary in cognitive linguistics, conceptual metaphors and metonymies will be written in SMALL CAPITALS.

refers to the head of a stupid person, as a jellybean does not contain anything solid inside (the similarity is based on the conception that a stupid person does not have too many ideas in the head), and a head that is like a jellybean might imply that somebody lacks the usual intellectual capacities. *Clockwork orange* ('a person made into an automaton') is a metonymy within a metaphor: the hero of the novel *Clockwork Orange* is in a metonymical relationship with the text itself (PLACE FOR PERSON), and there is also a metaphor at work, by which a person is likened to a machine.

Reference should also be made to Goossens (1995), who created the term "metaphtonymy" to refer to the process when both metaphor and metonymy act upon an idiomatic expression. For example, *to beat one's breasts* ('to make an open noisy show of sorrow that may be partly pretence') represents a case of metaphor from metonymy: the metonymic basis is the religious practice of beating one's breast while one confesses one's sins publicly. This image is then mapped through metaphor onto non-religious situations as well. Goossens also identified a metonymy-within-metaphor pattern, where there is a "built-in metonymy" (*op.cit.*, 169) in the metaphor: in *shoot one's mouth off* ('talk foolishly about what one does not know about or should not talk about') the source domain of firearms is mapped onto the target domain of unthoughtful linguistic action. *Mouth*, at the same time, metonymically stands for a person's speech faculty.

Geeraerts (2002) analysed the interaction of metaphor and metonymy in composite expressions, such as idioms and compounds. He claims that there are plenty of compounds that are neither purely metaphorical, nor purely metonymical, but involve both types of meaning extension. According to Geeraerts, such cases can be classified into three main categories: metaphor and metonymy can occur in a compound expression (1) consecutively; (2) in parallel; and (3) interchangeably.

An example of the first category is *schapenkop* ("sheep's head", i.e., 'dumb person'), where the analysis of the compound's meaning involves two steps: first, "sheep's head" is metaphorically extended towards the reading 'a human head like that of a sheep, a stupid head', and second, a metonymical step leads to 'a person with a head like that of a sheep, a stupid person'. The compound *droogkloot* ("dry testicle" — 'boring person, bore') exemplifies the second case, when metaphor and metonymy act upon the meaning in parallel. The compositional, literal reading "dry testicle" metonymically stands for "a person with dry testicles". This

reading, however, serves as the input for a further metaphorical extension, leading to the boring person sense. *Badmuts* ("swimming cap" — 'bald person') represents the third category, i.e., the interchangeability of metaphor and metonymy. According to Geeraerts, the compound can be analysed in two ways: either "swimming cap" leads metonymically to 'a person who looks as if he was wearing a swimming cap, a bald person', or "swimming cap" is metaphorised as 'a head that looks as if it is covered by a swimming cap, a bald head', and from there metonymically extended to 'a bald-headed person'. As the author points out, the semantic explanation can go either way, there is no principle by which one line of analysis can be favoured over the other.

I could not agree more. In my view, it is very difficult—if not impossible—to decide even in cases such as *schapenkop* which process acts upon the compound first, metaphor or metonymy. For this reason, I believe that forming categories on the basis of the metaphorical and metonymical sequence is pointless. Moreover, as *badmuts* also shows, whichever line of analysis we choose, the result is the same; and that is what counts. For these reasons I recommend an approach which concentrates on the various ways metaphor and metonymy can act upon the various parts of the compound expression, and not on the possible sequence of the cognitive processes involved.

5. Typology and analysis of metaphor- and metonymy-based compounds

In this section, I wish to go beyond the analyses proposed by Warren (1992), Goossens (1995) and Geeraerts (2002), and show that conceptual metaphor and conceptual metonymy can act upon the meaning of noun–noun compounds in a remarkable variety of ways. I claim that there are distinct patterns of compounds that are based upon conceptual metaphor and metonymy; these patterns seem to be productive. I have identified four such patterns, whereby conceptual metaphor and metonymy act simultaneously upon the compound in the following ways: (1) metaphor-based semantic relationship between the constituents of the compound and metonymy-based modifier; (2) metaphor-based semantic relationship between the constituents of the compound and metonymy-based profile determinant; (3) metonymy-based modifier and metaphor-based profile determinant; and (4) metaphor-based modifier and metonymy-based pro-

file determinant. These four main categories yield various subtypes, based on the type of conceptual metaphor and metonymy participating in the meaning of the compound.

5.1. Metaphor-based semantic relationship between the constituents of the compound and metonymy-based modifier

In this subsection, I will discuss those compounds that, apart from a metaphorical relationship between N_1 and N_2, also involve metonymy, such as *macarena page* ('a webpage capitalising on a current fad, they are usually full of fluff and have a short life expectancy'; source: www.word-spy.com). The meaning of the compound is based upon the activation of both metaphor and metonymy, since there is a metaphor that provides the understanding of N_2 in the terms of N_1 on the one hand (a webpage that is like the macarena dance in the sense that the macarena was a dance that was immensely popular a couple of years ago, though this popularity lasted for only a couple of weeks), and a metonymy that is activated by the concept denoted by N_1 on the other hand (*macarena page* does not contain information about the macarena—it is a webpage that holds information about a current fad, therefore *macarena* stands for any fad that has a short life expectancy but enjoys huge popularity).

Figure 2 shows the structure of these constructions. There are two concepts, X and Y, which have corresponding phonological poles, [x] and [y] respectively. There is a perceived similarity between the two concepts denoted by the two constituents of the compound which provides the basis of the meaning of the whole. Moreover, there is a metonymy acting upon the meaning of the compound as well. The first constituent can be regarded as a unit whose semantic pole is embedded in an Idealised Cognitive Model (ICM for short).[18] Since X is a part of the ICM, it is related to it through a conceptual metonymy.

[18] The notion of idealised cognitive models, or ICMs, was introduced by Lakoff (1987). A very good explanation of what ICMs are is offered by Radden and Kövecses (1999, 20): "the ICM concept is meant to include not only people's encyclopaedic knowledge of a particular domain but also the cultural models they are part of. The ICM notion is not restricted to either the world of reality, the world of conceptualisation or the world of language but [...] may cut across these ontological realms." This understanding of ICMs will be used in this paper as well.

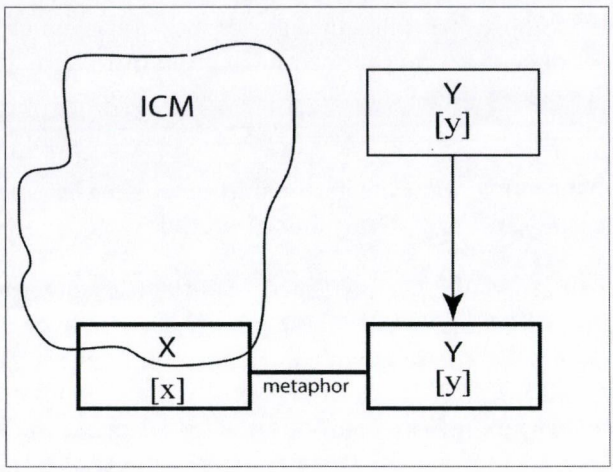

Fig. 2

Model of a creative compound with a metaphor-based relationship between the two constituents and a metonymy-based modifier

5.1.1. Sign metonymies

According to Radden and Kövecses (1999, 24), the pairing of a concept with a form gives rise to the Sign ICM. The authors provide the example of the word form *dollar* or the dollar sign *$*, which are linked with the 'currency denomination for dollar'. This relationship is based upon the rule that the form metonymically stands for the concept it denotes, which is expressed in the following metonymy: FORM FOR CONCEPT. As Radden and Kövecses argue, the very nature of language is based upon this metonymic principle, which is described by Lakoff and Turner (1989, 108) as WORDS STAND FOR THE CONCEPT THEY EXPRESS: "[s]ince we have no other means of expressing and communicating our concepts than by using forms, language as well as other communication systems are of necessity metonymic. It is also for this reason that we fail to notice the metonymic character of language" (*ibid.*).

Alpha geek ('the person with the most technological prowess in an office or a department') and *alpha girl* ('the dominant member in a group of girls')[19] exemplify typical cases of the Sign metonymy. First of all, we have a human being, a *girl* and a *geek*, who are likened to the first letter of the Greek alphabet. The meaning of the whole denotes girls and geeks

[19] Both *alpha geek* and *alpha girl* come from an internet-based collection of English neologisms; http://www.wordspy.com.

who are the first in their group; this "prime position" is represented by the concept of the letter alpha. How is the concept of primariness linked to the letter α?

It is this metonymy, FORM FOR CONCEPT, which is at work in the first constituent of *alpha geek* and *alpha girl*: the form α stands for the concept it expresses—namely it being the first letter in the Greek alphabet. This concept of primariness is the shared similarity that exists between *alpha* and *geek* on the one hand, and *alpha* and *girl* on the other hand. However, there is a slight difference in meaning between the two *alpha*s: in the former compound, it denotes the highest level of technological knowledge, while in the latter expression it is used to denote the quality of having the greatest influence and popularity within a group. How can *alpha* be used in these compounds while meaning different—though—related things?

According to Langacker (1991), semantic relationships are based on the identification of an appropriate active zone of the elaborated concept. This means that it is less probable for *alpha geek* to mean, for example, 'the most popular IT person in an office' because the meaning of *geek* brings into focus the frame of a person who is an expert with computers.[20] Thus the active zone of *geek* is technological prowess (and not popularity)—this quality is emphasised by *alpha*. In the case of *alpha girl*, however, the profile determinant has a more general meaning, and denotes a young female. Since the frame of *girl* is so general, *alpha* (denoting 'primariness') cannot bring into focus any sort of quality as in *alpha geek* for instance. The meaning negotiation between the two constituents of the compound results in the meaning of 'a girl who is the first among other girls'.

5.1.2. Concept metonymies

As Radden and Kövecses (1999) argue, concept metonymies involve a shift from Concept_A to Concept_B, where the two concepts are part of the same ICM and are related to each other in some specific way. The two major types of metonymy-producing relationships can be subsumed under two general conceptual configurations: (1) whole ICM and its parts (e.g., PART OF A THING FOR A WHOLE THING, as in *England* for 'Great

[20] According to the CCED, *geek* means "[somebody] who is skilled with computers and who seems more interested in them than in people".

Britain'); and (2) parts of an ICM (e.g., PLACE FOR PRODUCT MADE THERE, as in *champagne*).

5.1.2.1. MEMBER OF A CATEGORY FOR THE CATEGORY

There are numerous compound expressions where one entity (denoted by N_2) is compared to another entity (N_1) that is an instantiation of the MEMBER OF A CATEGORY FOR THE CATEGORY metonymy. As stated by Radden and Kövecses (1999, 34), a category and its members form an ICM, the Category-and-Member ICM, which can be analysed as an instance of the whole-part configuration, more precisely as an instance of the PART FOR WHOLE metonymy.

Waitress mom ('a woman who is married, has children, works in a low-income job, and has little formal education')[21] is a compound that can be regarded as a type of metonymical construction of the MEMBER OF A CATEGORY FOR THE CATEGORY conceptual metonymy. The mother, denoted by the second constituent, is likened to a waitress, as denoted by the first constituent of the compound. However, the concept of waitress metonymically stands for the whole social class of married women working in low-income jobs.

Why is *waitress* selected to stand in the place of the modifying element, as opposed to e.g., *hairdresser*, *secretary* or *saleswoman*? The answer I believe lies in what Lakoff (1987, 79; after Rosch 1978) calls "prototype effect": a subcategory or a member of a subcategory is selected to comprehend the category as a whole because it possesses all the prototypical attributes of the category. This does not mean that all waitresses are married, have children and are badly paid, but rather that our culture takes the waitress as a social stereotype of her category (mothers who work in a badly paid job and have little formal education). According to Lakoff (*ibid.*), "[s]ocial stereotypes are cases of metonymy—where a subcategory has a socially recognized status as standing for the category as a whole, usually for the purpose of making quick judgments about other people."

However, the meaning of *waitress mom* would never have arisen without a further social stereotype: that of the housewife mother (Lakoff 1987, 77–84). Lakoff claims that the category of mother has a central, prototypical case, with a mother who is married to the father of her natural child and stays at home all day with her children. Thus the ex-

[21] Source: www.wordspy.com.

pression of *working mother* does not simply mean a mother who happens to be working, but the category of *working mother* is defined in contrast to the stereotypical housewife mother. As Lakoff argues, the stereotypical view is that mothers who do not stay at home all day with their children cannot properly care for them and bring them up. There is also the stereotypical image of work, which is something that is done away from home, and housework and child-rearing do not count. This stereotype is fought against with the bumper sticker "Every mother is a working mother" (*op.cit.*, 80). Thus, similarly to *working mother*, *waitress mom* is also defined on the background of the housewife mother stereotype, as a less prototypical member of the mother category, as she does not stay at home with her children but goes out to work instead. However, similarly to housewife mother, *waitress mom* also functions as a stereotype, namely that of the category of low-paid, under-educated working mothers.

5.1.2.2. PRODUCER FOR PRODUCT

This metonymy is an instantiation of the Production ICM (Radden–Kövecses 1999, 39–40), which involves actions in which one of the participants is a product created by the action. The PRODUCER FOR PRODUCT, or more specifically the ARTIST FOR HIS WORK, is at play in *picasso porn* ('the scrambled signal of a pornographic cable channel as seen by a nonsubscriber').[22] What we have is porn (denoted by N_2) that is like the work of Picasso (denoted by N_1): the nonsubscriber sees only very scrambled images of naked women that resemble the work of the cubist artist. As Radden and Kövecses argue (*ibid.*), it is the very close association that exists between an artist and his work in our culture that provides the immediate understanding of the metonymical character of N_1. The shape of paintings—usually rectangular—is similar to the shape of a television set; the frame of the painting maps onto the television box, while the painting that is contained on the canvas (in between the frames) corresponds to the television screen. These mappings imply that there is a one-shot image metaphor involved between the source domain of a painting and the target domain of a television set.

A very relevant question to ask about *picasso porn* is why it is Picasso who is selected to metonymically stand for his work, why not some other cubist or expressionist painter, such as Braque, Matisse or Kandinksy? I believe that there are two main reasons for choosing Picasso. First, he

[22] Source: www.wordspy.com.

was the artist who established abstract painting in the form of cubism, and became famous for depicting quite a few women on his canvas within this new style of painting which greatly distorted the original shapes and figures. The name of Picasso is thus intricately linked with paintings of distorted women (and it should not be overlooked that it is his *Les Demoiselles d'Avignon*, which can be considered to be one of his most well-known paintings), more than e.g., Kandinsky or Matisse. Second, *Picasso* alliterates with *porn*—which is further evidence for the significant role that phonological considerations play in the formation of metaphor- and metonymy-based compounds.

5.2. Metaphor-based semantic relationship between the constituents of the compound and metonymy-based profile determinant

This section focuses on metaphor- and metonymy-based compounds where there is a metaphorical relationship between the modifier and the profile determinant; at the same time there is also a conceptual metonymy acting upon the head element (Figure 3). I believe that it is this type of creative compounding pattern that underlies *hammerhead* ('a stubborn person').[23] What happens here is that the profile determinant, *head*, stands in a metaphorical relationship to the modifier, *hammer*. Thus we have a head that is like a hammer: hard, clumsy and unyielding. At the same time, *head* metonymically stands for the person via a PART FOR WHOLE conceptualisation, more specifically HEAD FOR THE PERSON. This latter metonymy underlies several compounds and idiomatic expressions in English, such as *hothead* ('a person who is easily aroused to anger'), *heads will roll* ('those responsible for the blunder will be dismissed'), *to fling oneself at someone's head* ('to pursue someone in the spirit of infatuation').[24] It is important to note that the sequence of the metaphor and the metonymy acting upon the compound in this case is definitely relevant to the meaning of the expression: *hammerhead* cannot be analysed by taking the metonymy first, as that would yield *hammer person*—a compound that could mean e.g., a person who prefers to work

[23] *Hammerhead* emerges in both Ryder's (1994) and Warren's (1992) writings, although they use it to refer to two different entities. In Ryder's case, it means 'a type of shark', while in Warren's usage it denotes 'a stubborn person'. In the paper I will use Warren's definition of the compound.

[24] All the examples are from PDEI.

with a hammer as opposed to working with a drill (as in the following comment: "Oh, I'm a hammer person when it comes to DIY").

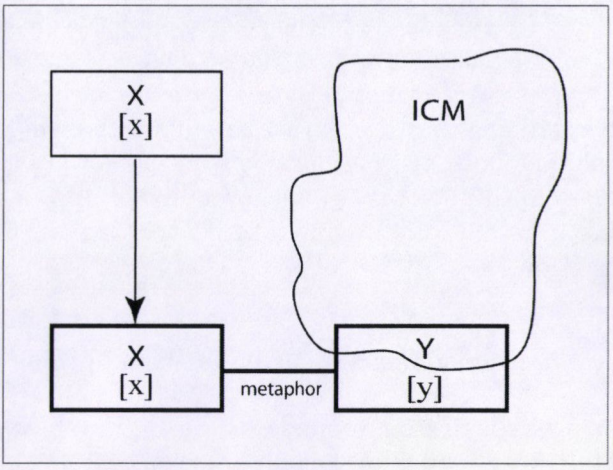

Fig. 3

Model of a creative compound with a metaphor-based relationship between the two constituents and a metonymy-based profile determinant

A further compound I wish to analyse in this section, *bell-bottoms* ('trousers that are very wide at the bottom of the leg'), is based upon an image metaphor (Figure 4).

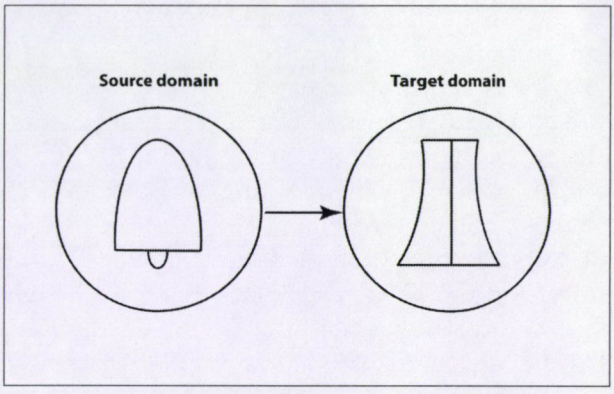

Fig. 4

Representation of the image schema of *bell-bottoms*

Image metaphors map relatively little from source to target. In the case of *bell-bottoms*, the skeletal shape of a bell is mapped onto the shape of

the bottom part of a pair of trousers. The profile determinant of the compound, *bottoms*, serves as a metonymical cue by which the complete garment, i.e., the pair of trousers can be accessed through the PART FOR WHOLE conceptual metonymy. I would like to emphasise that my analysis does not wish to take a stand on the sequence of metaphorical and metonymical processing: for instance, *bell-bottoms* can just as well be accounted for by claiming that metonymy acts upon the whole compound, i.e., 'the bell-shaped bottoms' metonymically stand for 'a pair of trousers which has bell-shaped bottoms'. Whichever line of approach is chosen, conceptual metaphor and metonymy take centre stage in the semantics of the construction.

5.3. Metonymy-based modifier and metaphor-based profile determinant

In this section, I will discuss compound expressions that have a metaphorical profile determinant and whose modifying element is based upon some sort of conceptual metonymy. In the case of *alpha geek* and *alpha girl* it has already been shown that the meaning of the first constituent is understood via the FORM FOR CONCEPT metonymy, where the form (in this case the letter "α") stands for the concept it denotes—that is, it being the first letter of the Greek alphabet. It is this concept of "primariness" that is understood by the word *alpha* in these constructions. *Alpha pup* ('market research jargon for the kid who is deemed by his or her peers to be the "coolest" in their school, neighbourhood or town')[25] is more similar in meaning to *alpha girl* than *alpha geek*, where the expression denotes 'a girl who is the first among other girls'. In both *alpha girl* and *alpha pup*, the profile determinant has a general meaning, and thus *alpha* (denoting 'primariness') cannot bring into focus any sort of quality as in *alpha geek* for instance. The meaning negotiation between the two constituents of *alpha* and *pup* results in the meaning of a kid who is the "coolest" of all, i.e., the child with the largest influence in his/her group.

The metaphorical profile determinants of the *alpha pup* can be accounted for by the everyday conceptualisation of humans as animals, based upon The Great Chain of Being metaphor system (Lakoff–Johnson 1980). In the case of *alpha pup*, humans are understood as dogs, with the "help" of the PEOPLE ARE DOGS conceptual metaphor (which

[25] Source: www.wordspy.com.

is a submetaphor of the more general PEOPLE ARE ANIMALS conceptual metaphor).[26]

In the case of *gutter bunny* ('mountain biker slang for a person who commutes to work on a bicycle'),[27] the modifier is rooted in our cultural knowledge of cycling in the city. In urban neighbourhoods, the edges of the roads are created so as to form gutters where the water can collect and flow away. If there is no cycle path, then cyclists use the side of the road for riding (where the gutter is located). All this information is packed into *gutter*, through which we can access the Cycling in the City ICM.[28] The metaphorical profile determinant, *bunny*, activates mappings between a person who cycles to work and a rabbit. In my opinion, the quality of swiftness that we associate with rabbits (as opposed to the slowness of a tortoise) is mapped onto the cyclist: once again it is a part of our cultural knowledge (and part of the Cycling in the City ICM) that getting about with a bicycle in a city is very often a much faster means of travel than doing so with a car or public transportation. As a last note I wish to add that the constituents of *gutter bunny* exhibit a LOCATION schema (i.e., a location–located semantic structure), similarly to plenty of other compounds of English (such as *belly button* for instance).

5.4. Metaphor-based modifier and metonymy-based profile determinant

Acidhead ('an LSD user')[29] represents a compound where the modifier is metaphor-based, while the profile determinant is metonymy-based. The compound can be paraphrased as 'a head that is full of acid', where the LSD IS ACID conceptual metaphor provides the understanding of *acid* as the drug in question. The compound evokes an image of a head full of acid—this CONTAINMENT schema can be accounted for by THE HEAD IS A CONTAINER conceptual metaphor, which is very prevalent in English and underlies numerous idiomatic expressions. For instance, Benczes (2002)

[26] It needs to be emphasised that *puppy* does turn up in a number of English idioms, denoting a young person: a *puppy/young puppy*—'an arrogant or conceited young man', *puppy fat*—'plumpness that the boy or girl will shed when reaching maturity', *puppy love*—'the love of a very young, immature person' (all the examples are from PDEI).

[27] Source: www.wordspy.com.

[28] This ICM is of course different to the Cycling in the Countryside ICM, where there are no gutters for instance.

[29] Source: LDOCE.

analyses idioms that contain the word *head* in them and shows that basic metaphors such as THE HEAD IS A CONTAINER and IDEAS ARE PHYSICAL OBJECTS motivate idioms such as *need to have one's head examined* and *have rocks in one's head.* In fact, the image of a head full of acid also suggests that there is no place left in the container/head for other "objects", such as ideas. Therefore, somebody who uses LSD on a regular basis runs the danger of losing the ability to think rational thoughts.

Needless to say, the metonymical profile determinant provides access to LSD addicts through the HEAD FOR THE PERSON conceptual metonymy. The question can of course be raised why *head* is used as the reference point in order to access the whole person, instead of some other body part. I believe that two arguments can be put forward in favour of *head.* First, the HEAD FOR THE PERSON conceptual metonymy is highly conventional and crops up often in English, both in compounds and in idiomatic expressions (see section **5.2**). Second, the effects of LSD—which is a hallucinogenic drug—are felt primarily in the head.

It is quite interesting about the semantics of this compound that, although the meaning of the overall expression is somebody who is addicted to LSD and uses it regularly, neither *acid* nor *head* implies this habituality. This, I believe, can be accounted for by a further conceptual metonymy acting upon the compound as a whole. Being on LSD can be construed with the help of the Event ICM (Radden–Kövecses 1999, 32), which can be metaphorically viewed as containing subparts, or rather subevents. In the case of *acidhead*, the habitual state of being under the influence of LSD stands for the present state (even if the person denoted by the compound is not taking drugs at a given moment). Therefore, a PART FOR WHOLE metonymy—HABITUAL FOR PRESENT—accounts for the aspect of regularity that is implied by the compound.

6. Conclusion

Traditionally, noun–noun combinations were classified into two semantic groups: endocentric and exocentric compounds. In the case of endocentric compounds, the concept designated by the compound represents a subcategory of the entity expressed by the head noun (thus *apple tree* is an endocentric compound because it is a type of tree). Most compounds of English are endocentric. Since the class of exocentric or headless compounds is much smaller, they have been generally regarded as exceptional cases, which fail to abide by normal compound formation rules, and for

this reason they have been excluded from a systematic linguistic analysis. Cognitive linguistics adopts a different approach, claiming that the analysability of nominal constructions is not a yes-no question but an issue of degree: thus there are transparent expressions such as *apple tree* on the one end of the spectrum, and semantically opaque cases like *red tape* on the other end.

The paper has argued that metaphor- (and/or metonymy-) based compounds such as *red tape* are not semantically opaque, but can be systematically analysed with the help of cognitive linguistic tools such as conceptual metaphor and metonymy. To prove this point, the paper focused on noun–noun compounds where the meaning is affected by conceptual metaphor and metonymy. Although both Warren (1992) and Goossens (1995) have noticed that the meaning of compounds can be based upon metaphor and metonymy, their analyses were restricted to a couple of examples. Geeraerts (2002) attempted to systematise metaphorical and metonymical compounds (it should be emphasised that his analyses were based upon Dutch—not English—examples), but he concentrated on the sequence by which metaphor and metonymy is activated in the meaning of the compound expression. The problem with this line of analysis is that it is often very difficult to decide which process acts upon the meaning of the compound first—metaphor or metonymy?

The present paper attempted to go beyond previous analyses by systematically mapping the various patterns by which metaphor- and metonymy-based compounds are formed in English. I have claimed that there are distinct patterns of compounds that are based upon conceptual metaphor and metonymy; these patterns seem to be productive. I have identified four such patterns, whereby conceptual metaphor and metonymy act simultaneously upon the compound in the following ways: (1) metaphor-based semantic relationship between the constituents of the compound and metonymy-based modifier; (2) metaphor-based semantic relationship between the constituents of the compound and metonymy-based profile determinant; (3) metonymy-based modifier and metaphor-based profile determinant; and (4) metaphor-based modifier and metonymy-based profile determinant.

I wish to emphasise that my analyses do not wish to take a stand on the sequence of metaphor and metonymy acting upon the meaning of the noun–noun combination: as I have pointed out with respect to *acidhead*, for instance, there are several ways of proceeding with the analysis. Nevertheless, whichever line of enquiry is chosen, the result is the same: with

the help of cognitive linguistic tools, the meaning of such compounds can be explained. This implies that a cognitive linguistic theory can in fact account for a class of compounds that have been mostly regarded as peripheral members of the English language.

References

Adams, Valerie 1973. An introduction to Modern English word formation. Longman, London.

Adams, Valerie 2001. Complex words in English. Longman, Harlow.

Algeo, John (ed.) 1991. Fifty years among the new words: A dictionary of neologisms, 1941–1991. Cambridge University Press, Cambridge.

Allan, Keith 1986. Linguistic meaning, vols. I and II. Routledge & Kegan Paul, London & New York.

Bauer, Laurie 1983. English word-formation. Cambridge University Press, Cambridge.

Bauer, Laurie – Antoinette Renouf 2001. A corpus-based study of compounding in English. In: Journal of English Linguistics 29 : 101–23.

Benczes, Réka 2002. The semantics of idioms: a cognitive linguistic approach. In: The Even Yearbook 5 : 17–30. (www.btk.elte.hu/delg/publications)

Benczes, Réka 2004a. Creative compounding in English. Doctoral dissertation, Eötvös Loránd University, Budapest.

Benczes, Réka 2004b. On the analysability of English exocentric compounds. In: Jezikoslovlje 5 : 5–25.

Benczes, Réka forthcoming. Creative noun–noun compounds. In: Annual Review of Cognitive Linguistics.

Bloomfield, Leonard 1933. Language. The University of Chicago Press, Chicago.

Botha, Rudolf P. 1968. The function of the lexicon in transformational generative grammar. Mouton, The Hague.

Carstairs-McCarthy, Andrew 1992. Current morphology. Routledge, London & New York.

Clark, Eve V. 1981. Lexical innovations: How young children learn to create new words. In: Werner Deutsch (ed.): The child's construction of language, 299–328. Academic Press, London.

Coulson, Seana 2000. Semantic leaps: Frame-shifting and conceptual blending in meaning construction. Cambridge University Press, Cambridge.

Cruse, David A. 1991. Lexical semantics. Cambridge University Press, Cambridge.

Dirven, René – Marjorie Verspoor 1998. Cognitive exploration of language and linguistics. John Benjamins, Amsterdam.

Downing, Pamela 1977. On the creation and use of English compound nouns. In: Language 53 : 810–42.

Fabb, Nigel 1998. Compounding. In: Andrew Spencer – Arnold M. Zwicky (eds): The handbook of morphology, 66–84. Blackwell, Oxford & Malden MA.

Fauconnier, Gilles – Mark Turner 2002. The way we think: Conceptual blending and the mind's hidden complexities. Basic Books, New York.

Geeraerts, Dirk 2002. The interaction of metaphor and metonymy in composite expressions. In: René Dirven – Ralf Pörings (eds): Metaphor and metonymy in comparison and contrast, 435–65. Mouton de Gruyter, Berlin.

Goossens, Louis 1995. Metaphtonymy. The interaction of metaphor and metonymy in figurative expressions for linguistic action. In: Louis Goossens – Paul Rauwels – Brygida Rudzka-Ostyn – Anne-Marie Simon-Vandenbergen – Johan Vanparys (eds): By word of mouth: Metaphor, metonymy and linguistic action in a cognitive linguistic perspective, 159–74. John Benjamins, Amsterdam & Philadelphia.

Jespersen, Otto 1954. A Modern English grammar on historical principles, Part VI: Morphology. Bradford & Dickens, London.

Katamba, Francis 1993. Morphology. Macmillan, Houndmills & London.

Kiefer, Ferenc 1998. Alaktan. In: Katalin É. Kiss – Ferenc Kiefer – Péter Siptár: Új magyar nyelvtan [A new Hungarian grammar], 187–290. Osiris Kiadó, Budapest.

Kooij, Jan G. 1968. Compounds and idioms. In: Lingua 21 : 250–68.

Kövecses, Zoltán 2002. Metaphor. A practical introduction. Oxford University Press, Oxford.

Lakoff, George 1987. Women, fire, and dangerous things. The University of Chicago Press, Chicago.

Lakoff, George – Mark Johnson 1980. Metaphors we live by. The University of Chicago Press, Chicago.

Lakoff, George – Mark Turner 1989. More than cool reason: A field guide to poetic metaphor. The University of Chicago Press, Chicago.

Langacker, Ronald 1987. Foundations of cognitive grammar. Theoretical prerequisites. Vol. 1. Stanford University Press, Stanford.

Langacker, Ronald W. 1991. Concept, image, and symbol. The cognitive basis of grammar. Mouton de Gruyter, Berlin.

Langacker, Ronald W. 2000. Grammar and conceptualization. Mouton de Gruyter, Berlin.

Levi, Judith N. 1978. The syntax and semantics of complex nominals. Academic Press, New York.

Marchand, Hans 1960. The categories and types of present-day English word-formation: A synchronic-diachronic approach. Otto Harrassowitz, Wiesbaden.

Matthews, Peter H. 1974. Morphology. Cambridge University Press, Cambridge.

Radden, Günter – Zoltán Kövecses 1999. Towards a theory of metonymy. In: Klaus-Uwe Panther – Günter Radden (eds): Metonymy in language and thought, 17–59. John Benjamins, Amsterdam.

Rosch, Eleanor 1978. Principles of categorization. In: Eleanor Rosch – B. B. Lloyd (eds): Cognition and categorization, 27–48. Lawrence Erlbaum, Hillsdale NJ.

Ryder, Mary A. 1994. Ordered chaos. The interpretation of English noun–noun compounds (Studies in Linguistics 123). University of California Press, Berkeley & Los Angeles.

Selkirk, Elizabeth O. 1982. The syntax of words (Linguistic Inquiry Monograph 7). MIT Press, Cambridge MA.

Spencer, Andrew 2001. Morphology. In: Mark Aronoff – Janie Rees-Miller (eds): The handbook of linguistics, 213–38. Blackwell, Oxford & Malden MA.

Sweetser, Eve 1999. Compositionality and blending: semantic composition in a cognitively realistic framework. In: Theodore Janssen – Gisela Redeker (eds): Cognitive linguistics: Foundations, scope, and methodology, 129–162. Mouton de Gruyter, Berlin.

Warren, Beatrice 1978. Semantic patterns of noun–noun compounds (Gothenburg Studies in English 41). Gothenburg University Press, Gothenburg.

Warren, Beatrice 1992. Sense developments. Almqvist & Wiksell, Stockholm.

Williams, Edwin 1981. On the notions "lexically related" and "head of a word". In: Linguistic Inquiry 12:245–274.

Dictionaries consulted

CCED = Collins Cobuild English Dictionary for Advanced Learners. 2001. 3rd edition. HarperCollins Publishers, Glasgow.

LDOCE = Longman Dictionary of Contemporary English. International Students Edition. 1999. 3rd edition, 6th impression. Longman, Harlow.

PDEI = Gulland, Daphne M. – David G. Hinds-Howell (eds) 1994. The Penguin Dictionary of English Idioms. Penguin Books, London.

Internet sources

http://www.wordspy.com.

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THE ADAPTIVE NATURE OF "MEANING AS UNDERSTANDING"*

GÁBOR GYŐRI

Abstract

In the paper I discuss semantic change as a cognitive adaptation process which flexibly adjusts the culturally shared conceptual category system of a language to changing conditions in the environment. I back up this view with the claim that the evolutionary function of cognition is to provide the organism with functional "knowledge" of its environment for the sake of adaptive orientation in a flexible way relative to the stability of environmental conditions. Hence, the cognitive function of language is to promote social cognition in order to facilitate the sharing of knowledge that proves functional and adaptive in the given physical, social and cultural environment of a group of individuals. In this light the cognitive function of the mental machinery of conceptualization and imagery — as the basis of meaning as understanding — is the adaptive construal of phenomena. Semantic leaps in the form of metaphor, metonymy and other kinds of meaning extension create new adaptive perspectives on the environment. When the circumstances triggering such novel usage persist, these perspectives will become conventionalized in the process of semantic change, leading to new established forms of functional and adaptive imagery.

1. Introduction

Contrary to approaches to meaning based on the doctrine of philosophical rationalism, according to which cognition is "the convergence of our ideas and the truth about the world" (Chomsky 1988, 158), cognitive semantics claims that meaning is based on mental imagery and conceptualizations of reality which do not objectively correspond to it but reflect a characteristic human way of understanding. Thus, one of the basic axioms of cognitive semantics is that linguistic meaning originates in the human interpretation of reality. This involves conceptual mappings from familiar domains of experience to unfamiliar or less well-understood domains in

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the form of metaphor, image schema projections, and blending of mental spaces, among others (Lakoff–Johnson 1980; Johnson 1987; Fauconnier 1994; 1997).

Since meaning derives from the way human beings make sense of the world, the conceptualizations which underlie meaning are not governed by autonomous linguistic processes but their operation is based on cognitive mechanisms at any level of cognitive functioning — from perception to complex conceptual structures (Langacker 1987, 98; 1991, 2). Although this involves a great deal of subjectivity due to the fact that cognitive processes occur in individual human minds, meaning is "shared, public, and 'objective,' in an appropriate sense of objectivity" due to common human ways of embodied understanding of a shared reality (Johnson 1987, 175), and also a common conceptualizing capacity (Lakoff 1987, 280).

However, an account of the social nature of linguistic meaning requires an even more functional and practical explanation in terms of social interaction because of the dynamic nature of language. The system of a language is never in a motionless state. Changes are continuously going on in all of its parts, meaning being the most unstable area in this respect. Changes in the meanings of otherwise established expressions tend to occur relatively easily, often within the lifetime of one generation (cf. McMahon 1994, 174–5). This is made possible by the fact that meaning relies on rather malleable conceptual structures (in the minds of individuals). Categories are relatively easily stretched or reshaped owing to their prototypical nature and fuzzy boundaries, and the encyclopedic nature of meaning even allows the prototypical center to shift and thereby give rise to a new category (Győri 2002, 152). The cognitive operations underlying these linguistic processes can obviously occur only in the minds of individual speakers and reflect their individual perspectives and understanding of the world. However, such individual conceptualizations are constrained not only by the common conceptualizing capacity and the shared reality but also by the requirement of intelligibility between interlocutors. Mutual intelligibility demands some common ground which is achieved through the interlocutors coordinating their expectations of each other's intentions on the basis of all those various commonalities that constitute their culture (Clark 1996, 325). Thus, the social nature of meaning actually evolves through the conventionalization of individual conceptualizations during speaker-hearer interaction in the communicative process. In other words, the conceptualizations constituting the semantic poles of

expressions will be continuously "shaped for symbolic purposes according to the dictates of linguistic convention" (Langacker 1987, 98).

Thus, making sense of the world actually happens at two levels. On the one hand, the malleability of conceptual structures allows their reshaping by way of various cognitive mechanisms, which is good strategy for making sense of the world at the level of the individual. However, when individual conceptualizations are put into linguistic form for communicative purposes, the interlocutors partake in a social cognitive activity. They share the contents of their minds: mental representations, mental states, beliefs, etc. With the specific conceptualizations becoming conventionalized as meanings of particular linguistic expressions, a collective or social level of sense making is achieved.

Below I will look at these levels of sense making from a wider perspective. Specifically I will consider how they relate to the cognitive function of language in general, the relationship between cognition and language, and the evolutionary function of cognition. My aim is to provide a functional explanation of meaning as understanding at both the individual and social levels and of the interactive processes between them.

2. Meaning as creative and conventionalized understanding

The lexicon of every language codes a relatively well-defined and finite system of conceptual categories, i.e., established conceptualizations, which are available to speakers for communicating their mental contents and their perspectives of the world in conventionalized ways. In spite of this, speakers often take a particular expression (or word) and employ it in an unconventional or figurative way in some novel context. This section will look at how meaning as understanding reveals itself in this dynamic character of the semantic structure of language. I will discuss how and why speakers diverge from conventional ways of expression and how and why such divergence affects the category system of language in the long run.

2.1. Making sense through semantic leaps

There are various sociocultural and psychological factors due to which speakers may occasionally judge the entrenched meanings provided by the conventional expressions of their language unsuitable or insufficient

for conveying their ideas. When none of the available expressions seem to match their momentary conceptualization of some aspect of reality, speakers may resort to some novel figurative usage which deviates from conventional modes of expression. In this way they temporarily modify the conventional meaning of a particular expression with the purpose of getting some novel conceptualization across. Speakers resort to such context dependent temporary semantic modifications of conventional expressions in order to comply with some immediate communicative expectation (Tomasello 2002 [1999], 168).

Geeraerts (1997) has claimed that novel usage is governed primarily by two basic communicative principles: expressivity and efficiency, where "expressivity is always the primary cause of change, whereas efficiency involves the choice of the linguistic means realizing the expressive intention" (Geeraerts *op.cit.*, 105). The semantic extension which occurs during the creative-innovative usage of an otherwise established expression is possible due to the malleability of the underlying conceptual structures. Based on these, speakers employ various cognitive mechanisms in the form of metaphor, metonymy, narrowing or broadening of meaning, blending, etc. for the sake of immediate expressiveness in their communicative interactions. Thus, a speaker trying to comply with communicative needs also faces a cognitive challenge. Phenomena of reality are designated not only for the sake of discourse, but also because conceptualizations fixed in this way are essential for economical and effective thought. As Anderson (1988, 93) pointed out, language stabilizes conceptual structure against fragmentation.

Some two decades ago Carroll (1985) conducted a study which offers some indication as to how novel expressions might do the job. In Carroll's study subjects were asked to make up names for various things, either unfamiliar or only lacking a conventional name. It was observed that the names generated tended to describe and categorize because they referred in some degree to properties of the name's referent. When the subjects were asked to rate the names they produced according to quality, the names that were easy to learn and remember (i.e., descriptive, natural, etc.) and easy to use (i.e., distinctive, brief, etc.) were rated as "good names" (Carroll *op.cit.*, 5). As the criteria for easy remembering and easy usage indicate, names are the better the more unambiguously they highlight a category. This is obviously due to what Rosch (1978, 30) called the cue validity of features, which is the degree to which a particular feature of a category has the capacity to cue the complete category, i.e., the total set of its features.

Therefore, when initiating innovative usage in an effort to communicate some unconventional conceptualization, a speaker must search for an expression with a semantic structure that is appropriate to be modified in the desired way, and must also make a choice as to the cognitive mechanism to implement the modification in the most effective manner. This procedure is affected by the salience of features of phenomena to be conceptualized, which is functionally determined by specific cognitive factors (Győri 2002). Basically, this functionally determined salience influences the possible construals of phenomena and through this the choice of an expression to be used in a non-conventional way. For example, Common Germanic **huson* meaning 'covering for the legs' developed through metonymical extension from Proto-Indo-European **(s)keu-* 'to cover' obviously due to the conceptualization of the garment as 'a thing covering (the legs)' on the basis of the most salient feature. As later development in English testifies, the expression with the sense 'leg covering' (cf. German *Hose* 'pants') gave rise through metaphorical extension to the word *hose* with a completely independent meaning, i.e., a hose was conceptualized as 'a thing similar to the leg of a pair of trousers.'

Thus, in the process of semantic change new categories are created (cf. Győri 1996), since language is obviously a device for the categorization of experience (e.g., Geeraerts 1997, 7–8, 20; Taylor 1989). Content words clearly name categories but the fact that language is a system of categories is apparent not only in the case of content words. Functional elements (e.g., articles, prepositions, suffixes, etc.) also categorize reality, as they are very general categorizations of relations between non-linguistic phenomena as humans perceive them. Many prepositions, for instance, are linguistic instantiations of various image schemata, i.e., they categorize recurring patterns in our experience, like *in* and *out* in the case of the CONTAINER schema, *up* and *down* in the case of the VERTICALITY schema, or *from* and *to* in the case of the SOURCE–PATH–GOAL schema (Johnson 1987, 30ff.; Lakoff 1987, 271ff.).

Speakers' linguistic behavior is influenced by various communicative maxims pertaining to successful communication in the widest sense, from getting one's ideas across efficiently to achieving social success (Keller 1994). In order to comply with such maxims, speakers often construct meaning in creative ways and produce semantic leaps in the form of occasional wordings with a figurative meaning (Coulson 2001). If written, these would often require quotation marks to indicate their unusualness and to draw the reader's attention to the fact that the conventional

meaning has been altered. Most of the time, however, the modification of conventional linguistic forms happens spontaneously and unconsciously in the course of communicative interaction between speakers and hearers (Anttila 1989, 408). Therefore, spontaneous and intuitive mutual intelligibility between the interlocutors is a basic requirement in the case of newly introduced expressions with no established conventional meanings in the language (Palmer 1978, 309; Fritz 1998, 21).

Thus, the communicative principles and the cognitive factors do not just guide creative mental processing in the production of novel meaning through semantic leaps, but they must also facilitate intelligibility, i.e., the comprehension side of meaning construction (Coulson 2001, 2). Mutual intelligibility derives from various sources, from the common human ways of embodied understanding of a shared reality and a common conceptualizing capacity, involving various universal cognitive mechanisms and operations, to the perceptual and functional salience of phenomena and the context-dependence of unconventional expressions, all of which is based on the shared knowledge of the interlocutors. All of these together will provide the basis for the proper interpretation of occasion-bound meanings.

However, one of the best possible grounds for mutual intelligibility is the analogical character of human mental processing. It is a basic characteristic of human thought that all new phenomena are mentally grasped via an analogy to already familiar cognitive structures (e.g., Heit 1997; Gentner–Markman 1997; Holyoak–Thagard 1997). Anttila (1989, 141) has even claimed that language is part of the human innate capacity for analogy. In fact, we utilize familiar knowledge through analogical thinking when we categorize, make inferences and create and learn new abstractions. Analogy is crucial in making sense of the world by recognizing similarities, i.e., by noticing that certain new experiences are similar to old ones in specific ways. However, similarity is not just 'out there' but is to a large extent in the eye of the beholder. According to Holyoak (1984, 204), "[a]nalogy [...] is structured similarity with functional import." Holyoak and Thagard (1997, 36) have identified three constraints in analogical reasoning. First, the analogy rests on perception of direct similarity. Second, structural parallels are sought for. And third, the analogy has a certain purpose, i.e., it is guided by what the reasoner intends to achieve by it.

This functionality is crucial to the mechanism of innovative usage and the construction of novel meaning. The choice of a conventional

expression from which the speaker 'takes a semantic leap' in order to get some new conceptualization across depends on what familiar cognitive structure that expression designates and the way this structure can be utilized by processing it through various cognitive mechanisms like metaphor, metonymy, blending, etc. This ensures both the adaptability of meaning to new experience and the intelligibility of meaning extension. Furthermore, as Geeraerts (1997, 113–4) has shown, the flexibility and dynamism of the prototypical character of semantic structure also restricts the range and direction of such extensions, which serves as an additional aid for interpretation.

The basis of cognitive semantics is akin to the above insights in cognitive psychology, as Langacker's (1987, 105) formulation testifies:

> "Our mental experience is coherent by virtue of the structure we impose on it. A pivotal aspect of this structuring capacity is the interpretation of novel experience with reference to previous experience, [...]."

Johnson (1987, 174) has also stressed the importance of familiar information in making sense of new experience, and Lakoff (1987, 346) has pointed out that motivation — in the sense of relatively easy cognitive processing due to certain clues providing mental support, like iconicity (cf. Anttila 1989, 152) — is crucial to our understanding, learning and storing of new information. It is also this analogical character of human thinking that gains expression in figurative language. Our minds understand and interpret the world around us with the help of metaphorical and metonymical processes, image schematic projections, and idealized cognitive models (Lakoff–Johnson 1980; Lakoff 1987; Johnson 1987; Kövecses –Radden 1998; Gibbs–Colston 1995).

The fundamental cognitive processes, mostly metaphor and metonymy, that are universally employed by humans to comprehend the various phenomena of reality, i.e., "to make sense of the world," are manifest not only in the innovative though context-dependent spontaneous usage of established expressions, but actually they are also the ones that historical semantics has established as the basic linguistic mechanisms of historical change of meaning and according to which the larger portion of individual semantic changes can be classified. The well-definedness and finiteness of linguistically coded cultural categories, mentioned at the beginning of this section, is thus only theoretically true, since the category system coded in the lexicon of a language can never be captured in a completely motionless state. New expressions (words) continuously emerge in

the lexicon and existing expressions tend to acquire new meanings giving rise through this to new conceptual categories.

The conceptualizations reflected in innovative usage will first become temporarily coded in the language in the form of non-conventional expressions. Although most of them fade away quickly, some will spread and find their way into the system of the language. Coding in language evidently facilitates the activation of the appropriate cognitive routines and thus contributes to a category reaching a degree of entrenchment through which it achieves unit status (Langacker 1987, 100). Thus, Anderson's (1988, 93) claim, made from the perspective of cognitive psychology, that language stabilizes concept structure against fragmentation appears to be valid in this special historical sense, too, because it is obviously a lexical item through which a conceptual category can exist most explicitly at the social-cultural level.

Thus, we can look at the results of semantic changes in the lexicon as "fossilized" conceptualizations of previous generations. These conceptualizations have outlived the period of their spontaneous appearance and have become culturally established. In this way they later on impose particular conceptualizations of the world on future generations, but at the same time also provide the source for creative novel usage in the future. Since it is a historical linguistic fact that "words come from other words" (Hopper 1990, 151), the inventory of established expressions will constrain possible novel conceptualizations in the communicative-cognitive activity of interlocutors. Thus, linguistically coded categories will canalize the utilization of familiar knowledge in innovative usage because the larger portion of culturally shared knowledge is obviously manifest in the semantic structure of the available conventional expressions.

In sum, semantic change is the result of two different processes at two interconnected levels. The first level is that of innovative usage in everyday linguistic activity. The second level consists in the spreading and conventionalization of innovations. The two levels are organically interconnected not only because the output of the first level serves as input for the second level, but also because in turn the output of the second level furnishes the material on which the processes of the first level operate. That is, the source for new semantic extensions (or leaps) is provided by one-time innovations that have become established expressions. In the following I will examine the significance of the interdependence of this interconnection with regard to the cognitive functioning of language.

2.2. Semantic extension and semantic change: on-line and long-term cognitive adaptation

Whenever we use language, we attempt to use it in a way that it represents our conceptualizations of the world as faithfully as possible for the purpose of communicating them to others. As already mentioned, there are several pressures on effective communication. These include immediate representing and referring needs, communicative expectations, adherence to communicative maxims, striving for expressivity and efficiency in communicative interaction, clarity and precision of expression, and the faithful rendering of one's own perspective, among others. Beside these internal factors external ones like variations and transitions of our everyday environment may also pose cognitive-communicative challenges for the interlocutors, who are thus often induced to resort to linguistic innovations, usually in the form of meaning extensions, novel compounds and derivations, or by initiating metaphorical, metonymical and other indirect references. These linguistic operations are the direct manifestation of the cognitive-communicative function of language and are the result of flexible adaptive linguistic behavior in the effort to effectively cope with the communicative and cognitive challenges.

As Palmer (1996) eloquently argues, the human capacity for imagery "is adaptive if it guides or promotes adaptive behaviors," and language must have evolved to provide "a means by which speakers can evoke and reinforce adaptive imagery in one another" (Palmer *op.cit.*, 52). The *ad hoc* innovative usages in the everyday linguistic activity of speakers serve this evoking and reinforcing of adaptive imagery and they function as the mechanism of continuous or "on-line" adjustment of language to novel conditions. Depending on the persistence of such conditions, speakers may tailor their language repeatedly to the same circumstances in the same way. Obviously, the conceptualizations and semantic leaps—manifest in these innovative unconventional expressions—that best serve this adaptive purpose are the ones that are most likely to get conventionalized and fixed in the semantic structure of the language through semantic change in the long run. In this way the semantic structure of the language becomes adapted to the cognitive-communicative conditions which have originally triggered the innovative usages but have become stable and culturally salient.

For any change to qualify as true adaptation in an evolutionary sense, it must come about by way of a selection mechanism (Plotkin 1994, 51). In fact, several authors have proposed that the spreading of linguistic

innovations is actually a selection process. Thus, the conventionalization of novel expressions is a sociocultural process that is based on selection from a pool of linguistic variation (cf. Fritz 1998, 73; Keller 1985, 234; McMahon 1994, 225). According to Croft's Theory of Utterance Selection, variation comes about through altered replication of linguistic forms as "a result of speakers adjusting the mapping from language structure to external function [...], that is, meaning in context" (Croft 2000, 8). When speakers select such non-conventional variants, they gradually establish a convention through the use of these variants in appropriate contexts (Croft *op.cit.*, 7 and 30). However, most authors claim that, contrary to biological evolutionary changes, linguistic changes appear to be teleological processes because in language change it is not a spontaneously given variability upon which selection acts in order to adapt the system to the challenges of changed conditions. This non-predetermined but seemingly still goal-directed character of language change is described by Keller (1985, 235) in the following way (cf. also Croft *op.cit.*, 31):

> "[...] whereas, in nature, the variations evolve according to chance, with regard to communicating we create variation already in anticipation of the selection to be expected."

Though language does not change in a predetermined direction, on the above grounds it seems to be undeniable that language is inherently a goal-directed system (Anttila 1989, 194). This appears to be especially obvious in semantic change where the ultimate source of variation is the speakers' creative and innovative usage of their language. Particular variants are created in response to communicative and cognitive challenges, i.e., the emergence of the variability of linguistic expressions is conditioned by changing circumstances because they arise as the result of an immediate problem-solving behavior first. This communicative behavior is triggered by various "phenomena of culture [...] [which] elicit various responses to nomination, for example, metaphor, metonymy, or other figures of speech, and, as a result, synchronic variation increases. This variation is the basis of semantic change [...]" (Anttila *op.cit.*, 153).

Thus, semantic change is inherently functional. The innovations that prove to be adaptive conceptualizations of given phenomena will be selected from the variation of the available innovations through an (unconscious) preference by the speech community, which preference is actually the manifestation of an adaptive linguistic behavior. In other words, when a particular innovative usage comes under a lasting selection pres-

sure in the form of communicative needs of a wide sociocultural range, change will occur in the language system.

3. The nature of cognition: an evolutionary explanation of adaptive processes in language

Above I argued that semantic change is basically a cognitive adaptation process in language. However, this claim is somewhat vague unless it can be embedded in an evolutionary theory of cognition and is supported by what is known about the adaptive function of cognition in general. Therefore, my aim in this section is to supplement and strengthen my point by presenting an evolutionary biological view of cognition and showing how the cognitive functioning of language, including the processes of cognitive adaptation, derives from the general biological functions of cognition.

3.1. The functions of cognition

According to an old definition by Neisser (1976, 1), "[c]ognition is the activity of knowing: the acquisition, organization and use of knowledge." This definition — as Neisser also indicated — does not apply to human beings alone but also to non-human animals. The activity of knowing is primarily of a biological nature and is an evolutionary adaptation because the acquisition, organization and application of knowledge about the environment is in general the fundamental basis of any organism's contact and interaction with the environment it inhabits (Plotkin 1994).

Cognition has an adaptive role because all this functioning has one aim: to enhance the organism's average probability of survival in its environment by adjusting its behavior to expected situations (Csányi 1989, 205; Plotkin *op.cit.*, 120). Consequently, not all information that can be picked up from the environment will count as relevant for an organism in its interactive behavior with the environment. Only the information the processing of which contributes to the organism's adaptive behavior will be utilized. In other words, the function of cognition is knowing the world in a way that is required for an organism's adaptive interaction with its environment. The cognitive mechanisms of any organism have been adapted to this interaction and permit therefore a species-specific perception of the environment and processing of incoming information. Hence, cognition appears to be of a relativistic nature.

On the one hand, the same environment will require different functional interactions, thus different "views" of it, in different species. On the other hand, the same environment may require different interactions on different occasions of the same individual, depending on a multitude of various internal and external factors. Rosch (1978, 29) formulates this idea very clearly:

> "[T]he perceived world [...] [is] not a metaphysical world without a knower. What kinds of attributes *can* be perceived are [...] species-specific. [...] What attributes *will* be perceived [...] is undoubtedly determined by many factors having to do with the functional needs of the knower interacting with the physical and social environment."

The biological mechanisms for acquiring, organizing and applying knowledge operate primarily within an individual organism. Thus, the function of cognition is to construct and operate a dynamic internal model of the environment which controls the organism's behavior for the sake of adaptive interaction with that environment (cf. Csányi 1992). The proportion of genetically determined knowledge of the environment and of the necessary behavior therein on the one hand and individual experience and learned behavior on the other within that model is a function of both the complexity of the organism and of its environment (Bonner 1980, 138; Csányi 1988; Plotkin 1994, 149). The notion of environment, though, includes not only the natural and material environment but, relative to the complexity of the behavioral organization of a species, also their social and cultural environment. Therefore, in proportion to the complexity of social relationships in the lifestyle of a species, individually acquired and organized knowledge must be made collective within a group of individuals, i.e., cognition must take on social dimensions. Quiatt and Reynolds (1993, 141) define social cognition as "[t]he application of intelligence to the review of social information and the exploitation and management of social relationships toward attainment of short- and long-term goals." Thus, different species participate in social cognition to the extent that they rely on social interaction for their survival. This must be matched by the complexity of the different forms and mechanisms of communication through which the necessary sharing of information is achieved for the operation of a collective model.

3.2. Language as a tool for individual and social cognition

Human cognition derives from and shows evolutionary continuity with cognitive functioning in non-human primates in general (cf. Tomasello 2002, 32). Due to the extraordinary complexity of the human environment, however, which includes socially and culturally determined components to an exceptionally large extent, the adaptive function of human cognition pertains to functional behavior and appropriate orientation mostly in the human sociocultural environment rather than just to survival in the strict biological sense. To match this behavioral complexity, humans possess the most powerful device for sharing knowledge. Thus, human cognition is unique with regard to the fact that it is supplemented by a special device, language. Language is the evolutionary innovation of combining the interindividual function of communication and the individual function of cognition in one system, creating the capacity to manipulate symbols, which are used both externally in communication and internally in mental representation simultaneously (Győri 1999; 2001; Tomasello 2003). As a result, language is a tool not only for individual cognition, but due to its symbolic nature it enormously enhances the possibilities for social cognition (cf. Palmer 1996, 53).

An effective communicative system of a symbolic kind will enhance the power of a mental model of reality by lending it a social character. As a consequence, human mental models do not remain confined to knowledge gained from direct and personal experience, and individuals will be able to partake of and benefit from the experience of others in extreme proportions (cf. Plotkin 1994, 10). By facilitating the representation and distribution of individually acquired knowledge, language creates a culturally shared mental model of reality for the advantage of the whole community. Such a model of reality is more powerful and less subjective than any individual model because the adequacy of the model is constantly controlled by being compared to other individual models. In other words, the conceptual structures constituting the model are continuously coordinated and harmonized in the communicative interactions of interlocutors. In this way individuals sharing a language will also be able to share the same model of reality, which is qualitatively superior to any individual (i.e., private) model in range, accuracy, flexibility, etc.

Thus, the basic cognitive function of language builds on the general biological function of cognition in individual organisms but differs from it with regard to the fact that it serves as the basis for a culturally

shared model of reality on which every individual in a community can rely for the construction and operation of their own mental models of the environment in coordination with those of others. The power of this model derives from the fact that the basis of the knowledge shared through it is neither some common genetic endowment nor necessarily the same experience, but its symbolic nature. This symbolic model—with the help of the components (grammatical rules and linguistic signs) constituting it—can be operated creatively in various ways for processing information about the environment. New cognitive structures can be constructed actively and subjectively by any one individual and then conveyed to other individuals in order to substitute direct experience for them or to provide them with abstract conceptual constructions for understanding various relations between phenomena of reality.

In order for this social cognitive process to function correctly, language—as a social instrument for cognizing the environment—must always suit the cognitive needs of a speech community. This means that it must be able to encode all the necessary information about reality and model it in a way that facilitates optimal accommodation to a given environment. In other words, any particular language has to be such that it adaptively serves the acquisition, organization and application of knowledge in a community for interaction with the speakers' environment, exactly the things that make up the function of cognition in general (cf. Neisser 1976, 1).

4. Adapting language to cognition

In section **2** I described how semantic change occurs in language and claimed that it is an adaptation process. Here, armed with the wisdom of the previous section about the evolutionary function of cognition, I will discuss the broader relevance of semantic change for human cognition.

4.1. The adaptedness of language

Human cognition is characterized by its strong reliance on symbolic structures in the form of language. Therefore, language must inherently be designed to serve cognition. Even though the symbolic power of language is employed for creating a sociocultural cognitive model and not for the sake of individual cognitive processes, the cognitive function of language

is in line with the general biological function of cognition — though in a much more complex manner. As described above, the general biological function of cognition is knowing one's "world" for the purpose of interacting with it in optimally functional ways. This cognitive functioning does not simply depend on objective characteristics of reality but on the ways a given organism adapts to its environment due to its biology. Therefore, language — as an instrument of adaptive cognitive functioning — is obviously not structured as influenced by reality itself in some objective fashion. Language provides us with a special human perspective of reality (Tomasello 2002 [1999]; Lakoff 1987), manifest in "[t]he *perspectival nature of linguistic meaning* [, which] implies that the world is not objectively reflected in language" (Geeraerts 1997, 8). The specific cognitive perspective language provides of reality facilitates our adaptive interpretation of our environment.

Thus, a particular language — as a cognitive model of cultural validity in a human community — will function as an efficient cognitive device only if it provides an interpretation of the world that proves to be adaptive in the given natural and sociocultural environment of its speakers. In other words, for an adequate cognitive functioning any particular language must be adapted to the specific physical, social, cultural, historical, etc. environment which it is to model and in which it is to be used. Therefore, the system of conceptual categories defined in the lexicon of a language and manifest in a common repertoire of conventionalized conceptualizations in the minds of individual speakers provides ready-made functional knowledge about reality. These conceptual categories, stored in a linguistic form, furnish the "building blocks" of a speech community's social model of the environment, which constitutes an essential part of the culture of the community and also serves the cultural inheritance of experience and knowledge across generations (cf. Tomasello *op.cit.*, 180–1).

If the socially shared category system is to be an adaptive interpretation of reality, there must be good reasons why meanings of a language specify the categories they do and not others (cf. Clark 1996, 340). Comparing the semantic structures of languages, it becomes immediately apparent that different languages impose different categorizations on the world. This obviously results from the way languages are adapted to their environments—in line with the general function of cognition and the cognitive function of language (cf. Tomasello *op.cit.*, 127). An adequate orientation in a given sociocultural environment requires a specific category system and appropriate construals of particular phenomena. Thus, for

instance, languages of different peoples and cultures often construe the same phenomena of reality in different ways because their different environments demand different ways of adapting to them. Because of this, linguistic categorization very often reflects a rather intricate and complex social and cultural environment. This can be seen among others in the case of various classifiers in many aboriginal languages (e.g., Lakoff 1987, chapter 6; Palmer 1996, 126–41; Palmer–Woodman 2000). For instance, from the ten noun classes found in the Australian aboriginal language Nangikúrungurr and marked with separate prefixes, one contains only names of weapons, and another exclusively names of spears (Wierzbicka 1984, 314). This should be due to the fact that weapons (and among them spears especially) play a special role in the lifestyle of this people.

4.2. Semantic change as adaptation process

The ready-made knowledge about the environment the speakers of a language live in is functional and adaptive only relative to the stability of conditions over time (Palmer 1996, 52). Most of the time a language is relatively well adapted to this environment and facilitates the proper exchange of beliefs, ideas, knowledge, etc. about it by providing appropriate perspectives on reality in the form of different categorizations. However, the environment is never a stable metaphysical reality, but a changing one, and particularly our interpretation of it does not remain stable through time. Therefore, when cognizing reality, our conceptual system continuously exhibits an interplay between stability and flexibility in order to fit stable conditions, but at the same time also to be able to adapt to novel ones (Medin–Barsalou 1987, 468). This cognitive functioning must also have its effect on language. More precisely, the environment will exert its effect on language filtered through cognition, and cognition will shape linguistic structure to its needs (though naturally within the boundaries of the general structural properties of natural language).

It follows from the cognitive function of language that it should not only provide a means to adaptively model, both socially and individually, the given environment, but that it must also function as a flexible device for cognition to accommodate to any enduring change of cultural relevance in the environment and—given the human cultural and intellectual complexity—also in the perspectives and attitudes the community collectively takes on it. Thus, in order to remain a functional communicative and cognitive system, it is crucial that language be continuously suited to

cognition in a proper way. As Anttila (1989, 179) says, "[l]anguage serves the sociocultural ends and its task is thus to keep itself in an enduring state, to keep functioning, adapting itself to new environments."

Therefore, language must incorporate a mechanism which can optimally handle its adaptation to new circumstances. As far as the categorization function of language is concerned, the continuous adaptation of language to the changing conditions of and social attitudes to the particular environment in which it is used happens — as already indicated — through semantic-lexical change (Győri 2002). Thus, it may be argued that the differences in the semantic structure of different languages are due to the formation of culturally adaptive categories, which happens in the process of lexicalization, i.e., through semantic and lexical changes (accompanied by the morphological mechanisms of compounding and derivation) in the course of the history of a language. Etymologies reveal a great deal about how reality can be construed in alternate ways to facilitate this adaptation. For instance, the nouns *skin* and *hide* are synonymous expressions but their etymologies suggest totally different conceptualizations. *Skin* derives from Proto-Indo-European **sek-* 'cut' via the extended root **skend-* 'to peel off' (though via Scandinavian transmission), while *hide* derives from Proto-Indo-European **(s)keu-* 'cover, conceal.' Thus, *skin* was conceptualized as 'something that can be cut or peeled off the body of an animal,' while *hide* was conceptualized as 'something covering the body'. Consider further the English words *crab*, *lobster* and *shrimp*, the etymologies of which suggest conceptualizations as 'the carving one', 'spider-like', and 'curved', respectively. These words have no conventional everyday cover term in English, only the Latin *crustacean*, which, however, also covers wood lice, water fleas and barnacles. Hungarian *rák*, on the contrary, is a conventional everyday expression in the language and is not considered a genuine cover term even though it covers the former three from the above categories as one kind, but not the latter three, as it is not a biological technical term as *crustacean* is.

As we have seen in section **2**, the historical linguistic mechanism of semantic change does not simply lag behind independently occurring conceptual changes as some kind of labeling process but relies on and reflects the conceptualizations emerging from the conceptual mappings and the process of meaning construction in innovative language use. In other words, our cognitive processes will necessarily tailor language to the needs of cognition: the way we see the world and think about it in non-symbolic ways clearly affects the form of language (cf. Clark 1996, 342).

As Rosch (1978, 27) has claimed, the specific categories of the human mind that get coded in any particular language are not the "arbitrary product of historical accident or of whimsy" but the product of functional principles of categorization, and working with those categories should be the most efficient way to deal with the environment. Consequently, the two basic psychological principles, "cognitive economy" and "perceived world structure" (Rosch *op.cit.*, 28–9), also influence what conceptual categories will be socially adaptive and will as a result achieve cultural significance to become coded in a language. Thus, the process of cultural category formation is functional in nature since it is based on a speech community's social cognitive adaptation to situations its members are likely to encounter in their environment and which they have to handle by thinking, reasoning and communicating about them.

The social validity of these structures is achieved in the process of "conventionalization" through "sanctioning" by a speech community in speaker-hearer interaction (Langacker 1987, 65–6 and 156). This is of course not to deny that due to the complexity of design, language will necessarily also possess ultimately arbitrary structural features, i.e., ones without any functional relevance, and which are derived effects of other structures or effects of general structural constraints. Such phenomena will inevitably also leave their mark on the way language is.

5. Conclusion

Emergent meaning originating in creative meaning extensions (often coupled with compounding and derivation) can most of the time not be accounted for in purely algorithmic terms. Our capacity for the flexible use of meanings — manifest in non-rule-governed meaning creations — serves the purpose of adjusting our perspectives on our world in communicatively and cognitively functional ways, especially in accordance with fluctuations and variations of our environment. The human capacity for construal, conceptualization and imagery is adaptive in several ways. It enables the flexible communication of various cognitive perspectives we may take on the environment as influenced by the various ways we interact with its diverse phenomena, or by the role they play in our social, cultural or natural lives, but it also enables the communication of individual idiosyncratic perspectives versus established ones that we collectively take on things when unexpected circumstances so require.

Though the above cognitive functioning is part of our linguistic capacity, it is rooted in the general evolutionary function of cognition, which we share with other species. This function is to provide an organism with functional knowledge about its environment in the form of an internal model that is operated by the organism in order to adjust its behavior in a way that enhances its chances of survival. The adaptiveness of knowledge in these terms does not imply cognizing the environment in an objective fashion but refers to the fact that an organism has the capacity to "understand" the world—through operating its internal model of it—in exactly the way that promotes its survival, orientation and general success in concord with its biological make-up and needs, its individual experience with idiosyncratic factors of its environment, and also any unforeseen challenges posed by transitions of the environment.

Cognition is thus primarily an adaptive biological function in individual organisms. Its coupling with the function of communication makes cognition socially adaptive because information about the environment and the knowledge of appropriate interaction with it can be shared among individuals. Such interaction can then be harmonized and organized to the benefit of a whole group. Human language promotes social cognition to an exceptionally high extent due to its symbolic nature, i.e., the sophisticated combination of cognition and communication in one system. Symbols can not only be used to activate similar (or the same) mental representations in others, but also to create such. They can substitute personal experience and enable the sharing of knowledge even across generations.

The symbols of language provide us economically with ready-made knowledge about predictable conditions of our human environment, both natural and cultural, by constituting the building blocks of a socially shared cognitive model of this environment. Established expressions of the language supply conventional perspectives that have in some way proved useful and functional in the long run. However, social and cultural conditions and environmental circumstances will vary and change with time engendering changes also in the perspectives and attitudes the community collectively takes on them. The cognitive function of language requires that language as a social cognitive model be adjusted to these changes. Cognitive and communicative challenges ensuing from such changes are handled by innovative usage of expressions in the form of semantic extensions or leaps, which is possible due to the malleable

structures of meaning. These spontaneous novel conceptualizations reflect adaptive ways of understanding in novel situations.

Speakers' new adaptive conceptualizations of reality may also engender a long-term cognitive adaptation process in language. Novel expressions based on conceptualizations and imagery which prove functional and adaptive on a wide social basis will be selected for and will become conventionalized to provide new useful ready-made and thus cognitively economical ways to conceptually deal with our physical, social and cultural reality. Thus, the historical linguistic process of semantic change has the long-term adaptive function of adjusting the conceptual category system of the language to changing conditions by coding workable perspectives on them.

References

Anderson, John A. 1988. Concept formation in neural networks: Implications for evolution of cognitive functions. In: Human Evolution 3:81–97.

Anttila, Raimo 1989. Historical and comparative linguistics (2nd, revised edition). John Benjamins, Amsterdam & Philadelphia.

Bonner, John T. 1980. The evolution of culture in animals. Princeton University Press, Princeton NJ.

Carroll, John 1985. What's in a name? An essay in the psychology of reference. Freeman, New York.

Chomsky, Noam 1988. Language and problems of knowledge. The Managua lectures. MIT Press, Cambridge MA.

Clark, Herbert H. 1996. Communities, commonalities, and communication. In: John J. Gumperz – Stephen C. Levinson (eds): Rethinking linguistic relativity, 324–55. Cambridge University Press, Cambridge.

Coulson, Seana 2001. Semantic leaps. Frame-shifting and conceptual blending in meaning construction. Cambridge University Press, Cambridge.

Croft, William 2000. Explaining language change. An evolutionary approach. Longman, Harlow.

Csányi, Vilmos 1988. Contribution of the genetical and neural memory to animal intelligence. In: Harry J. Jerison – Irene Jerison (eds): Intelligence and evolutionary biology, 299–318. Springer-Verlag, Berlin.

Csányi, Vilmos 1989. Evolutionary systems and society. A general theory. Duke University Press, Durham NC.

Csányi, Vilmos 1992. The brain's models. In: Thomas A. Sebeok – Jean Umiker-Sebeok (eds): The semiotic web, 27–43. Mouton de Gruyter, Berlin.

Fauconnier, Gilles 1994. Mental spaces. Aspects of meaning construction in natural language. Cambridge University Press, Cambridge.

Fauconnier, Gilles 1997. Mappings in language and thought. Cambridge University Press, Cambridge.

Fritz, Gerd 1998. Historische Semantik. J. B. Metzler, Weimar.

Geeraerts, Dirk 1997. Diachronic prototype semantics. A contribution to historical lexicology. Clarendon Press, Oxford.

Gentner, Dedre – Arthur B. Markman 1997. Structure mapping in analogy and similarity. In: American Psychologist 52 : 45–56.

Gibbs, Raymond W. Jr. – Herbert L. Colston 1995. The cognitive psychological reality of image schemas and their transformations. In: Cognitive Linguistics 6 : 347–78.

Győri, Gábor 1996. Historical aspects of categorization. In: Eugene H. Casad (ed.): Cognitive linguistics in the Redwoods. The expansion of a new paradigm in linguistics, 175–206. Mouton de Gruyter, Berlin.

Győri, Gábor 1999. Evolutionary continuity and the rate and curve of language evolution. In: Evolution of Communication 3 : 207–26.

Győri, Gábor 2001. Symbolic cognition: Its evolution and adaptive impact. In: Gábor Győri (ed.): Language evolution. Biological, linguistic and philosophical perspectives, 113–29. Peter Lang, Frankfurt am Main.

Győri, Gábor 2002. Semantic change and cognition. In: Cognitive Linguistics 13 : 123–66.

Heit, Evan 1997. Knowledge and concept learning. In: Koen Lamberts – David Shanks (eds): Knowledge, concepts and categories, 7–41. MIT Press, Cambridge MA.

Holyoak, Keith J. 1984. Analogical thinking and human intelligence. In: Robert J. Sternberg (ed.): Advances in the psychology of human intelligence. Vol. 2, 199–230. Lawrence Erlbaum, Hillsdale NJ.

Holyoak, Keith J. – Paul Thagard 1997. The analogical mind. In: American Psychologist 52 : 35–44.

Hopper, Paul J. 1990. Where do words come from? In: William Croft – Keith Denning – Susanne Kemmer (eds): Studies in typology and diachrony, 151–60. John Benjamins, Amsterdam & Philadelphia.

Johnson, Mark 1987. The body in the mind. The bodily basis of meaning, reason and imagination. The University of Chicago Press, Chicago.

Keller, Rudi 1985. Towards a theory of linguistic change. In: Thomas T. Ballmer (ed.): Linguistic dynamics: Discourses, procedures and evolution, 211–37. Walter de Gruyter, Berlin.

Keller, Rudi 1994. On language change. The invisible hand in language. Routledge, London & New York.

Kövecses, Zoltán – Günter Radden 1998. Metonymy: Developing a cognitive linguistic view. In: Cognitive Linguistics 9 : 37–77.

Lakoff, George 1987. Women, fire, and dangerous things. The University of Chicago Press, Chicago.

Lakoff, George – Mark Johnson 1980. Metaphors we live by. The University of Chicago Press, Chicago.

Langacker, Ronald 1987. Foundations of cognitive grammar. Vol. 1. Theoretical prerequisites. Stanford University Press, Stanford.

Langacker, Ronald W. 1991. Concept, image, and symbol. The cognitive basis of grammar. Mouton de Gruyter, Berlin.

McMahon, April M.S. 1994. Understanding language change. Cambridge University Press, Cambridge.

Medin, Douglas L. – Lawrence W. Barsalou 1987. Categorization processes and categorical perception. In: Stevan Harnad (ed.): Categorical perception. The groundwork of cognition, 455–90. Cambridge University Press, Cambridge.

Neisser, Ulric 1976. Cognition and reality. Principles and implications of cognitive psychology. Freeman, San Francisco.

Palmer, Gary B. 1996. Toward a theory of cultural linguistics. Texas University Press, Austin.

Palmer, Gary B. – Claudia Woodman 2000. Ontological classifiers as polycentric categories, as seen in Shona class 3 nouns. In: Martin Pütz – Marjolijn Verspoor (eds): Explorations in linguistic relativity, 225–49. John Benjamins, Amsterdam & Philadelphia.

Palmer, Leonard R. 1978. Descriptive and comparative linguistics (2nd edition). Faber and Faber, London.

Plotkin, Henry 1994. Darwin machines and the nature of knowledge. Harvard University Press, Cambridge MA.

Quiatt, Duane – Vernon Reynolds 1993. Primate behaviour. Information, social knowledge, and the evolution of culture. Cambridge University Press, Cambridge.

Rosch, Eleanor 1978. Principles of categorization. In: Eleanor Rosch – Barbara B. Lloyd (eds): Cognition and categorization, 27–48. Lawrence Erlbaum, Hillsdale NJ.

Taylor, John 1989. Linguistic categorization. Prototypes in linguistic theory. Clarendon Press, Oxford.

Tomasello, Michael 2002. Gondolkodás és kultúra [Thinking and culture]. Osiris Kiadó, Budapest. (Hungarian translation of: The cultural origins of human cognition. Harvard University Press, Cambridge MA/London. 1999.).

Tomasello, Michael 2003. The key is social cognition. In: Dedre Gentner – Susan Goldin-Meadow (eds): Language in mind. Advances in the study of language and thought, 46–57. MIT Press, Cambridge MA.

Wierzbicka, Anna 1984. Apples are not a "kind of fruit"—the semantics of human categorization. In: American Ethnologist 2 : 313–28.

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WHOLE-PART AND PART-WHOLE INFERENCES IN GENERATIVE AND COGNITIVE LINGUISTICS*

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Abstract

The paper focuses on the relation between the analytical philosophy of science and modular and holistic approaches to cognitive linguistics, respectively. The authors show that Chomsky's as well as Bierwisch & Lang's and Lakoff & Johnson's approaches make substantial use of non-demonstrative inferences which the standard view of the analytical philosophy of science evaluates as fallacies. By outlining a metatheoretical framework focusing on plausible inferences, the authors argue that the inferences the theories mentioned make use of are plausible rather than fallacious. This finding illuminates basic aspects of theory formation in linguistics and motivates the revaluation of the methodological foundations of linguistic theories.

> "Zwischen der Philosophie und den Wissenschaften herrschen seit geraumer Zeit gestörte Verhältnisse; **die Wissenschaftstheorie ist der moderne Versuch, sie wieder ins Reine zu bringen.** Das findet in der Regel **weder** den Beifall der Wissenschaften, die ihren Abschied von der Philosophie als Abschied von einer spekulativen Vergangenheit zu stilisieren pflegen, **noch** den Beifall der Philosophie, sofern diese angesichts ihres reichen klassischen Erbes dazu neigt, der wissenschaftstheoretischen Askese philosophische Armut zu bescheinigen. [...] **Gegen diese Auffassung wendet sich heute die Wissenschaftstheorie.** In Form einer das wissenschaftliche Wissen analysierenden [...] Bemühung wird Wissenschaft wieder zu einem philosophischen Thema und **Philosophie wieder zu einem Element wissenschaftlichen Selbstverständnisses.**"
>
> (Mittelstraß 2004, 5–6; emphasis added)

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1. Introduction[1]

As Hilary Putnam showed in one of his seminal papers (Putnam 1962), however diverse the analytical philosophy of science in the first half of the twentieth century was, there was a set of assumptions which most approaches shared. Putnam called this set of assumptions the "received view" of the analytical philosophy of science. To put it in a very simplified manner, some basic characteristics of the latter can be summarized as follows:

(RV) The "received view" assumes, among other things, that

(a) scientific theories have to meet the standards of "rationality";

(b) scientific theories have to be "deductive", "empirical" and "explanatory"; and

(c) there is a clear distinction between the process of scientific discovery (called "the context of discovery") and the form in which the results of discovery, that is scientific theories, are presented (cf. "the context of justification").[2]

It is the "received view" that has served as the basic methodological standard in mainstream theoretical linguistics since the late fifties (see e.g., Ringen 1975) and that has influenced the development of current theoretical linguistics to a substantial extent. The best-known example

[1] In the paper we will make extensive use of quotations. This is, admittedly, not a very elegant way of arguing. Nevertheless, quotations will serve three important purposes. Firstly, the scope of our paper does not permit a detailed presentation of the theories it focuses on. Therefore, quotations will document our claims concerning those aspects of the theories which are relevant from our point of view but which cannot be introduced systematically. In such cases the quotations will appear in the footnotes. Secondly, they simply summarize pieces of background information which we will have to make use of as relevant steps within our line of argumentation; in such cases they will be part of the main text. Thirdly, we will argue against deeply rooted prejudices which most theoretical linguists share and this undermines the picture most linguistic theories draw of themselves. This is, of course, a risky enterprise. Thus, the quotations also serve the legitimization of our approach in that they witness that our claims are well-motivated by the logical and argumentation-theoretical literature which, unfortunately, most linguists are not familiar with.

Let us also remark that the present paper focuses on a possible application of plausibility theory to the analysis of argumentation in linguistics. However, plausibility theory is characterized, among other things, by a very vague terminology (see also Walton 2001 on this). Therefore, basically we will use all notions preexplicatively.

[2] For a detailed discussion of the "received view" cf. Suppe (1977).

of the impact of the "received view" on linguistics is, of course, generative grammar. However, the proponents of most current linguistic theories failed to notice the fact that the "received view" is anything but up to date. Although, as well-known developments in the philosophy of science witness, it has been **"out"** for several decades and no longer counts as a serious alternative to current trends, the majority of theoretical linguists **still** assumes its validity. For example, even the latest version of generative linguistics accepts the scientific standards of the received view.[3] In this respect, the methodology of linguistics is **far behind** the current state of the art in the philosophy of science. This situation is especially interesting with respect to the so-called "cognitive turn" in linguistics.[4]

It is instructive to observe that proponents of dominating approaches to cognitive linguistics consider it important to characterize their approach by relating it to the "received view". Accordingly, this relation is treated as a relevant component of the definition of the approach at issue. Basically, there are two extreme attitudes. On the one hand, **modular** approaches to cognitive linguistics—for example Bierwisch and Lang's two-level model—explicitly **conform to** the analytical tradition and, what is more, consider this as a major achievement.[5] In addition,

[3] "[...] a 'naturalistic approach' to the mind investigates mental aspects of the world as we do any others, seeking to construct intelligible **explanatory theories, with the hope of eventual integration with the 'core' natural sciences.**" (Chomsky 2000, 76; emphasis added)

[4] The notions "cognitive linguistics" and "cognitive semantics" will be used preexplicatively, too. For a possible explication of these notions, see Kertész (2004a).

[5] See the following quotation as an illustration:

> "Was besagt die angedeutete Perspektive der kognitiven Wissenschaften für das Verständnis linguistischer Fragestellungen? Der entscheidende Punkt ist, daß die Linguistik von der im wesentlichen deskriptiven Analyse natürlicher Sprachen zur Formulierung erklärender Theorien über ihren Gegenstandsbereich gelangt. Dieser Übergang von einer beschreibenden zu einer erklärenden Wissenschaft ist ein **fundamentaler Wechsel** in der Orientierung, auch wenn er sich schrittweise und nicht immer leicht erkennbar vollzieht. Er verlangt die Aufdeckung und kontrollierbare Formulierung von Gesetzmäßigkeiten oder Prinzipien, denen die Sprachkenntnis unterliegt, aus denen also ihre charakteristischen Eigenschaften abgeleitet werden können. In dem Maß, in dem solche Gesetzmäßigkeiten formuliert und begründet werden können, **wird die kognitiv orientierte Linguistik zu einer Disziplin, in der die in der Naturwissenschaft geltenden Grundsätze der Theoriebildung und Erklärung wirksam werden.**" (Bierwisch 1987, 646; emphasis added)

this assumed progress is claimed to be inseparable from the success of generative grammar.[6] On the other hand, **holistic** approaches such as the "second generation cognitive science" advocated by Lakoff and Johnson's cognitive theory of metaphor fiercely **reject** the analytical standards of scientific theory formation.[7] This rejection of analytical philosophy is, of course, accompanied by the rejection of generative grammar.

The fact that (i) the "received view" is an outworn conception within the philosophy of science and (ii) many current linguistic theories still accept it as a major methodological evaluation standard, suggests the **question** whether these linguistic theories **really** behave in the ways they declare. Do, for example, Chomsky's generative linguistics or Bierwisch and Lang's two-level approach really meet the standards of the so-called "received view" of the analytical philosophy of science, and, in turn, do Lakoff and Johnson or Langacker really follow a scientific attitude that radically differs from the methodology of the analytical tradition? This is the question which the present paper centres around. However, such a general and vaguely raised question is difficult to grasp. Therefore, so as to obtain a more precise and more specific problem whose discussion may lead to instructive findings, we will narrow it down in several respects.

Firstly, we will focus on **the structure of inferences**. The motivation for this decision is that the "received view" presupposes the rationality of scientific inquiry. Although within the analytical philosophy of science there are different views concerning the question of what rationality is, there seems to be agreement on the fact that one thing that rationality involves is that the theses of a theory must be connected by valid logical inferences, also known as **demonstrative** inferences.[8] Consequently, whether cognitive linguistic theories conform to the analytical tradition

[6] For example:

> "Es liegt mithin in der Natur der Sache, daß die Entwicklung der Linguistik als kognitive Wissenschaft nicht von der der generativen Grammatik zu trennen ist." (Bierwisch 1987, 646)

[7] "Philosophy is so much an implicit, though not always recognized, part of all intellectual disciplines that it has determined, for many investigators, the conception of what cognitive science is. There are at least two approaches to cognitive science defined by different philosophical commitments: a first-generation cognitive science that assumed most of the fundamental tenets of traditional Anglo-American philosophy and a second generation that called most of those tenets into question on empirical grounds." (Lakoff-Johnson 1999, 75)

[8] In accordance with the literature, we will treat the notions "demonstrative", "deductive" and "conclusive" as synonyms.

or not, may be tested, among other things, by examining to what extent they make use of demonstrative inferences.

Secondly, since both modular and holistic approaches to cognitive linguistics define themselves relative to generative linguistics, we are justified in discussing the latter as well. Thus, we will examine **three examples** so as to give an idea of how inferences in cognitive linguistics work: Chomsky's generative linguistics, Bierwisch and Lang's two-level model as an example of modular cognitive linguistics compatible with generativism, and Lakoff and Johnson's cognitive theory of metaphor as an illustration of holistic cognitive linguistics which rejects generative grammar in particular and the analytical philosophy of science in general.

Thirdly, in order to make our argumentation even more specific, we will choose two problematic patterns of inference as instructive points of departure. In particular, we will analyze applications of part-whole and whole-part inferences. The question of how to reconstruct these patterns of inference is controversial (see, e.g., van Eemeren–Grootendorst 1994; Kienpointner 1992, 277ff.; Woods–Walton 1989; Walton 1996 on this problem). Nevertheless, for the present purposes and as a first approximation, the following simplified outline of their structure will be sufficient.

(1) **Part-whole inference**
Premises:

(a) x is part of y

(b) x has the property P

Conclusion:

(c) y has the property P

(2) **Whole-part inference**
Premises:

(a) x is part of y

(b) y has the property P

Conclusion:

(c) x has the property P

Now the question arises as to how the "received view" of the analytical philosophy of science evaluates part-whole and whole-part inferences. The reason the analysis of (1) and/or (2) may be instructive is that they are **non-demonstrative** inferences. In the case of demonstrative inferences

it is impossible that the conclusion is false while the premises are true. Non-demonstrative inferences, however, do not guarantee the truth of the conclusion on the basis of the premises. It is either the case that the conclusion need not be true although the premises are true,[9] or the premises are uncertain themselves and therefore the conclusion is uncertain, too.[10]

As we have already indicated, the "received view" presupposes what Ralph H. Johnson calls "deductive chauvinism":

> "[...] validity is made the standard against which arguments are to be measured. [...] a serious problem with this conception is the underlying assumption it makes about argumentation: that **all argumentation is deductive in nature.**" (Johnson 1995, 111; emphasis added)

Consequently, according to the "received view", all non-demonstrative inferences should be evaluated as **fallacies**. See, for example, the following definition of the notion of fallacy:

> "An argument whose premises do not imply its conclusion is one whose conclusion **could** be false **even if** all of its premises are true. An argument that fails in this [...] way is said to be **fallacious**, or to be a **fallacy**."[11]
> (Copi–Burgess-Jackson 1996, 96; emphasis as in the original and added)

Thus, from the fact that (i) (1) and (2) are non-demonstrative inferences and (ii) all non-demonstrative inferences are considered to be fallacies, it follows that **these two patterns are to be considered as fallacious inferences**, too. Therefore, according to the standards of rationality which the "received view" of the analytical philosophy of science assumes, they must not play a significant role in the structure of scientific theories.

However, what makes this finding especially interesting is that—as we will show in section **2**—Chomsky's generative linguistics, Bierwisch and Lang's two-level approach and Lakoff and Johnson's cognitive theory of metaphor **do** make use of (1) and (2) irrespective of how these theories

[9] Let us illustrate this with respect to pattern (1). If (a) David Beckham's head is round, and (b) David Beckham's head is part of his body, then (c) David Beckham's body is round. Obviously, (a) and (b) are true, while (c) need not be true.

[10] Cf. for example *shaded modus tollens* in Tables 1 and 2 in section **3.5**.

[11] "This criterion, in effect, means that any argument that is not deductively valid [...] is a fallacious argument. It would mean, for example, that all arguments that are inductively strong but not deductively valid are fallacious. And it would mean that all arguments that have a weight of presumption in their favor, but are not deductively valid [...] arguments, are fallacious arguments." (Walton 1992a, 236)

define **their own** relation to the "received view" of the analytical philosophy of science. This finding leads to a highly problematic conclusion. Namely, on the one hand, all of the three theories violate the commonly accepted standards of the "received view" of the analytical philosophy of science which during the past five decades or so have been used as the basic methodological evaluation standard of linguistic theories. That this is so is quite natural with respect to holistic cognitive linguistics, but definitively counterintuitive in the case of the other two theories. Since the latter implicitly presuppose the standards of rationality advocated by the "received view" of the analytical philosophy of science, it follows that **they violate their own standards**. Therefore, if we accept the principles of rationality that the "received view" of the analytical philosophy of science maintains, all three theories should be rejected. However, such a decision would be fatal, because it leads to destructive consequences: in fact, there is no doubt that all three theories are successful enterprises widely applied by scientific communities, although, of course, different ones. Thus we obtain a **dilemma**:[12]

(D) We either maintain three linguistic theories which seem to violate the commonly accepted standards of rationality in the sense of (RV), or we reject them, although they are workable and successful.

Accordingly, we may reduce the problem outlined to the following more specific one:

(P) How can the dilemma (D) be solved?

The **aim of the paper** is to give an answer to (P) by arguing for the tenability of the hypothesis (H):

[12] In the present paper it would be beside the point to take sides between the three theories. We simply consider it to be **a fact** (in whatever sense) that all three theories are maintained by certain scientific communities and do not ask the question which of them is "better" or "true". Our task is to capture this fact, among others by trying to resolve (D), and **not to compare** the theories. Moreover, by "successful" and "workable" we mean the **heuristic potential** of theories: namely, their capability of solving the problems they tackle by using their own means and/or their capability of raising new problems which can be captured by the same means or which, alternatively, give rise to approaches going beyond the scope of the theory at issue.

(H) (a) On the one hand, the account of inferences that the "received view" of the analytical philosophy of science presupposes can be **replaced** by another approach which considers (1) and (2) as legitimate tools of scientific theorizing.

(b) On the other hand, this approach **does not** result in the strict rejection of the standards of rationality in the sense of (RV); rather, it extends them in so far as it distinguishes between two kinds of non-demonstrative inferences, namely, plausible and fallacious ones.

We will proceed as follows. In section **2** we will briefly present a very simple analysis of the way basic notions of Chomsky's theory of language, the central empirical hypothesis of the two-level approach and that of the cognitive theory of metaphor can be inferred from the premises they assume via (1) and (2). In section **3** we will outline some of the main tenets of a theory of plausible reasoning. We will show that the difference between plausible inferences and fallacies is basically context-dependent: whereas plausible inferences are effective tools of scientific problem solving in a given context of argumentation, fallacies are ineffective or even destructive. Therefore, in section **4** we will argue that the application of (1) and (2) is effective in the context of the three theories at issue, and that, consequently, these patterns are **not** to be seen as fallacies, but rather, as plausible inferences fulfilling important heuristic functions. Finally, in section **5** the findings will be summarized and far reaching conclusions concerning the nature of theory formation in linguistics will be drawn.

Already at this point it should be clear for the reader that we will be discussing inferences **not** from the point of view of logic, but from that of **argumentation theory**.

2. On the use of (1) and (2)

2.1. The problem

So as to make our line of thought as clear as possible, we will subdivide our main problem (P) into a series of sub-problems corresponding to the steps we summarized at the end of the previous section. We expect that through solving these sub-problems eventually we will be capable of arriving at (H). Accordingly, the first question we have to ask is this:

(P1) Do Chomsky's generative linguistics, the two-level approach and Lakoff and Johnson' cognitive theory of metaphor make use of (1) and (2)?[13]

2.2. Generative linguistics

In an ingenious paper Forrai puts forward the claim that Chomsky's philosophy of man is rooted in the notions of creativity, freedom and constraints (Forrai 1987, 50).[14] This means that Chomsky considers man to act freely within the constraints of his biological constitution. Moreover, Chomsky infers basic claims of his theory of language from this view of man by the use of a specific kind of non-demonstrative inference:

> "How does this view of human nature connect to the study of language? The connection might have been set up by Chomsky's definition of the subject of linguistics. Linguistics is assumed to be the science of the idealized native speaker's linguistic competence. This definition may give rise to a very special kind of analogical reasoning, which can be schematically described as follows: Premise 1: P is a part of w. Premise 2: w has the property A. Conclusion: P has property A_1, which is similar to property A. **It is a non-demonstrative inference from a property of the whole to the property of the part.** Chomsky's definition of the subject of linguistics establishes **whole-part relationship** between man and his linguistic competence. As a result, it facilitates **inference from the properties of human nature to the properties of linguistic competence.** Consequently, ideas about human nature may infiltrate into linguistic theory. What I will try to show is that the birth of some of Chomsky's linguistic ideas might be explained in this way."
>
> (*Ibid.*; emphasis added)

[13] We deliberately chose the examples to be discussed along the lines of the following considerations. Firstly, precise analyses of reasoning are highly complex and lengthy; therefore, to keep our own line of thought within the frames of the present paper, we chose **very simple** examples which serve illustrative purposes and are not claimed to be precise argumentation analyses. For detailed case studies of plausible reasoning in linguistics, see e.g., Kertész (2004b), Kertész–Rákosi (2005a;b), Rákosi (2005). Secondly, it is also important to exemplify that the reasoning patterns we are examining can be used for very different purposes in the three theories—e.g., for connecting the philosophical foundations of a given theory with its central notions, or for inferring the main empirical hypothesis of the theory, or for carrying out analyses of linguistic data. In this respect, our examples are deliberately heterogeneous. Thirdly, contrasting the two-level approach and generative linguistics (which accept the modularity hypothesis) on the one hand with the cognitive theory of metaphor (which pleads for the holistic hypothesis) on the other hand, exemplifies that even opposing empirical hypotheses may be built on the same patterns of inference.

[14] Forrai's paper is also discussed in Kertész (2004b), although in a different metatheoretical framework.

Obviously, the structure of this inference corresponds to (2). Forrai shows that the application of the non-demonstrative inference mentioned leads to a series of notions which are in the centre of Chomsky's theory of language. The reconstruction of this inference is as follows:

(3) Premises:

(a) Linguistic competence is part of human nature.

(b) Human nature has the property P.

Conclusion:

(c) Linguistic competence has the property P', where P' is similar to P (or even identical with it).

Depending on what properties P and P' stand for, a series of further inferences are carried out. Firstly, the property at issue is regularity. Accordingly, the particular inference is this:

(4) Premises:

(a) Linguistic competence is part of human nature.

(b) In human behaviour regularity prevails.

Conclusion:

(c) In linguistic competence regularity prevails.

Secondly, creativity is considered to be a major property of human nature as well as of linguistic competence. Now we can reconstruct the structure of the inference as follows:

(5) Premises:

(a) Linguistic competence is part of human nature.

(b) Creativity is a fundamental property of human nature.

Conclusion:

(c) Creativity is a fundamental property of linguistic competence.

Thirdly, since creativity presupposes rules, the following inference presents itself:

(6) Premises:

(a) Linguistic competence is part of human nature.

(b) Human nature is governed by rules.

Conclusion:

(c) Linguistic competence is governed by rules.

The fourth case concerns constraints. That is:

(7) Premises:

(a) Linguistic competence is part of human nature.

(b) Human nature is characterized by biological constraints.

Conclusion:

(c) Linguistic competence is characterized by biological constraints.

Fifthly, the structure of the inference underlying Chomsky's views of language acquisition can be reconstructed in this way:

(8) Premises:

(a) Language acquisition is part of human nature.

(b) Human nature is characterized by the fact that man creates freely within the constraints of his biological nature.

Conclusion:

(c) Language acquisition is characterized by the fact that man creates freely within the constraints of his biological nature.

Finally, Forrai mentions the evaluation measure of grammars. The reconstruction of the inference Forrai refers to is as follows:

(9) Premises:

(a) Linguistic competence is part of human nature.

(b) Human nature is characterized by systematicity.

(c) Systematicity is similar to simplicity.

Conclusion:

(d) Linguistic competence is characterized by simplicity.

So, relying on Forrai's considerations, we have seen that some of the major ideas which govern Chomsky's theory of language can be reconstructed as the conclusions of whole-part inferences in the sense of (2).

However, the situation is more intricate than we have assumed so far. In particular, Forrai starts his paper with the remark that although Chomsky himself never appeals to his political views so as to justify his

linguistic theory, it may be assumed that there is an indirect relationship between his political philosophy and his linguistic programme. In fact, it seems to be the case that both his linguistic and his political ideas are rooted in his views of man. That this assumption is not totally mistaken, can be documented by many passages in Chomsky's writings. For example, his reply to Mitsou Ronat's question concerning the relationship between his political and linguistic objectives is as follows:

> "If there is a connection, it is on a rather abstract level. [...] There is no very direct connection between my political activities, writing and others, and the work bearing on language structure, though in some measure they perhaps **derive from certain common assumptions and attitudes with regard to basic aspects of human nature.**" (Chomsky 1979, 3; emphasis added)

Interestingly enough, we may assume that this relation rests on a part-whole inference which is the inverse of the whole-part inference discussed so far and which corresponds to the pattern introduced in (1). That is, man is part of society and Chomsky infers basic properties of society from basic properties of human nature:

(10) Premises:

(a) Man is part of society.

(b) Man has the property P.

Conclusion:

(c) Society has the property P', where P' is similar to or identical with P.

This general pattern is realized in the following specific inferences:

(11) Premises:

(a) Man is part of society.

(b) Man is characterized by creativity.

Conclusion:

(c) Society is characterized by creativity.

(12) Premises:

(a) Man is part of society.

(b) Man is characterized by biological constraints.

Conclusion:

(c) Society is characterized by biological constraints.

(13) Premises:

(a) Man is part of society.

(b) Man is characterized by freedom within constraints.

Conclusion:

(c) Society is characterized by freedom within constraints.

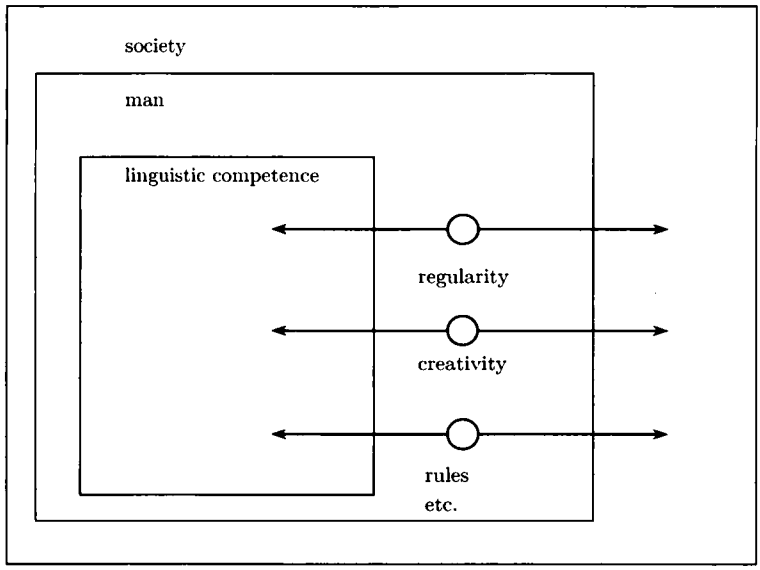

Fig. 1

In sum, we have seen two things. Firstly, Chomsky's views of man constitute the premises of two inferences pointing in opposite directions; the relationship between these two kinds of inferences is visualized in Figure 1. Secondly, both the philosophical foundations of his theory of language and his theory of society are closely related to the use of (1) and (2).

2.3. The two-level approach

The modularity hypothesis was introduced into linguistic theories in many different ways. The core of these diverse accounts is the following assumption:

(14) Knowledge of language is organized in a modular way.

The relevance of (14) is rooted, among other things, in the fact that it constitutes one premise of the central argument for the assumption that cognition as a whole is modularly organized (see also Kertész 2004a).[15] This inference leads to a very strong empirical hypothesis, but is, nevertheless, in most cases only applied implicitly. Then from (14) we can infer (15c) on the basis of (1):

(15) Premises:

(a) Knowledge of language is part of human cognitive behaviour.

(b) Knowledge of language is organized in a modular way.

[15] The argument, which leads from (14) to the modularity of cognition, is concisely summarized in the following quotation:

> "Historisch gesehen, entwickelte sich **die entscheidende Argumentation von der Autonomie zur Modularität**. Chomsky zeigte zunächst, daß natürliche Sprachen über Eigenschaften verfügen, die ein Kind nur dann unter den üblichen Bedingungen erwerben kann, wenn bestimmte diesen Eigenschaften zugrundeliegende Prinzipien nicht erlernt werden müssen, sondern bereits in der Struktur des Kognitionssystems verankert sind [...]. Da diese Prinzipien in keiner erkennbaren Weise auf Prinzipien anderer kognitiver Bereiche, wie etwa Perzeption oder Begriffsbildung zurückgeführt werden können [...], müssen sie in ihrer sprachspezifischen Form kognitiv verankert sein. Wenn dies so ist, folgt logischerweise die Modularitätsthese, d.h. unser Kognitionssystem muß zumindest zwei autonome Module enthalten, und zwar das Grammatikmodul und ein Modul, das alle übrigen kognitiven Funktionen umfaßt. Da weiterhin Evidenz dafür vorliegt, daß auch für die (visuelle) Wahrnehmung ein eigenes autonomes Modul anzusetzen ist [...], **gewinnt die Modularitätshypothese zunehmend an Plausibilität.**"
>
> (Fanselow – Felix 1987, 174; emphasis added)

Fodor's (1983) argument seems to have a similar structure:

> "Unabhängig von der Bewertung der einzelnen Beobachtung ist Fodor sicher zuzugestehen, daß er an einer Fülle von Beispielen erfolgreich demonstriert hat, daß perzeptuelle und sprachliche Prozesse im Kontext der Gesamtkognition des Menschen eine Sonderstellung einnehmen. Sie weisen Gesetzmäßigkeiten und Eigenschaften auf, die in anderen kognitiven Domänen nicht auftreten. Unter diesem Aspekt scheint die Auffassung eines globalen, alles umfassenden Kognitionssystems, das visuelle Perzeption und sprachliche Kodierung mit den gleichen Mechanismen und Strategien bewältigt wie das Lösen einer Mathematikaufgabe oder den Zusammenbau einer Maschine, wenig plausibel zu sein."
>
> (Fanselow – Felix *op.cit.*, 273)

Clearly, in both quotations the argument rests on a part-whole inference corresponding to (1) which is a frequently used problem-solving strategy in cognitive science.

Conclusion:

(c) Human cognitive behaviour is organized in a modular way.

As illustrated in the last footnote, in the literature (15c) is inferred not only from (14) by using (1), but from (16) and (1) as well:

(16) Visual perception is organized in a modular way.

(15c) is the main empirical hypothesis of modularism in general and the two-level approach in particular.[16] Nevertheless, Bierwisch and Lang use this conclusion as one of the premises of further inferences which are expected to yield the existence of specific autonomous subsystems. They focus on "semantic form" which is assumed to be the interface between the grammatical and the conceptual module. Thus they argue by making use of (2):

(17) Premises:

(a) The grammatical system/the conceptual system/semantic form is part of human cognitive behaviour.

(b) Human cognitive behaviour is organized in a modular way.

Conclusion:

(c) The grammatical system/the conceptual system/semantic form is organized in a modular way.

By way of summary, (1) and (2) constitute the means of inferring the central empirical hypotheses of the two-level-approach.

[16] "Basically, **all human cognitive behaviour** is organized in a modular fashion. The structure formation underlying any concrete behaviour performance is based upon the integration of various relatively autonomous, task-specifically interacting systems and subsystems (MODULES). Language, the different modes of perception, and the conceptual organisation of experience make up such systems, which for their part are again structured in a modular way. The aim to be derived from this assumption is to identify systems, to analyze their structure and organisation in the attempt to capture the rationale behind their interaction." (Lang et al. 1991; emphasis added)

2.4. The cognitive theory of metaphor[17]

Unlike (14), the holistic hypothesis assumes that knowledge of language cannot be subdivided into relatively autonomous systems and subsystems:

(18) Knowledge of language is a unified (holistic) system.

Among other things, holistic cognitive linguistics aims at the empirical reformulation, solution or elimination of classic philosophical questions concerning the nature of mind and knowledge (see e.g., Lakoff–Johnson 1999, 8). Against this background Lakoff and Johnson raise a series of classic philosophical problems to which they propose empirical solutions within the framework of their embodied realism. For example, they touch on the problem of Zeno's Arrow (Lakoff–Johnson *op.cit.*, 157). As is well-known, the problem of the Arrow is rooted in Zeno's assumption according to which time is a sequence constituting a time line. Now, if we imagine the flight of an arrow, then at any point in time, the arrow is assumed to be at some fixed location. At a later point, its location is at another fixed point. That is, the arrow is located at a single fixed point each time. Thus, Zeno concludes that there is no motion and time is not divided up into instants.

In the light of this formulation, Zeno's classic standpoint is this:

(19) (a) Classic philosophical problem: Is there motion?

(b) Classic philosophical solution: There is no motion, because at any point of time the arrow is at some fixed location.

Lakoff and Johnson specify the task of their own version of cognitive linguistics as follows:

> "The meaning of any philosophical question depends on what conceptual system is being used to comprehend the question. *That* is an empirical issue, an issue to be taken up by cognitive science in general and cognitive semantics in particular. [...] The same is the case for any proposed answer. An answer to a question like 'What is time?' is given relative to a philosophical conceptual system in which that answer is a meaningful answer. Such a philosophical conceptual system is **part of** the conceptual system of the philosophers doing the inquiry. The conceptual systems of philosophers are

[17] The following considerations are also discussed in Kertész (2004a) in a different context.

> no more consciously accessible than those of anyone else. To understand what counts as a meaningful answer, one must study the conceptual systems of the philosophers engaged in that inquiry. That too is an empirical question for cognitive science and cognitive semantics."
>
> (*op.cit.*, 136; italics as in the original and bold emphasis added)

The implicit argumentation underlying this quotation can be reconstructed in the following way:

(20) Premises:

(a) "a philosophical conceptual system is part of the conceptual system of the philosophers doing the inquiry," and

(b) the conceptual system of the philosophers doing the inquiry belongs to the subject matter of cognitive semantics.

Conclusion:

(c) A philosophical conceptual system belongs to the subject matter of cognitive semantics.

Lakoff and Johnson's solution to Zeno's problem uses a second inference as well:

(21) Premises:

(a) "a philosophical conceptual system is part of the conceptual system of the philosophers doing the inquiry,"

(b) the conceptual system of the philosophers doing the inquiry is a human conceptual system, and

(c) "the human conceptual system is metaphorically structured" (Lakoff–Johnson 1980, 6).

Conclusion:

(d) A philosophical conceptual system is metaphorically structured.

Thus, these inferences clearly rest on (2). From (20c) and (21d) it follows that it is the metaphorical structure of Zeno's conceptual system which is responsible for the problem of the Arrow. Therefore, this metaphorical structure needs to be revealed. The conceptual metaphor which is assumed to play a constitutive role in the structure of such a conceptual system is one that may be called the Moving Observer Metaphor (Lakoff –Johnson 1999, 146):

(22) LOCATIONS ON OBSERVER'S PATH OF MOTION ARE TIMES
THE MOTION OF THE OBSERVER IS THE "PASSAGE" OF TIME
THE DISTANCE MOVED BY THE OBSERVER IS THE AMOUNT OF TIME "PASSED"

This metaphor implies that "what we will encounter in the future is what we are moving towards", "what we are encountering now is what we are moving by", and "what we encountered in the past is what we moved past" (Lakoff–Johnson *op.cit.*, 152). It is the identification of the Moving Observer Metaphor that yields the empirical solution to the problem of the Arrow.[18]

That is:

(23) (a) Empirical reformulation of the classic philosophical problem:

Is there motion, if

– there is a part in the brain that detects motion, and

– our motion detectors identify the arrow as moving?

(b) Empirical solution to the empirical problem:

There is motion, because

– our brains give us multiple ways of perceiving and conceptualizing the world and, within the latter, motion as well,

– we have a literal and a metaphorical way of conceptualizing motion,

– (19b) is false, because Zeno made the mistake of taking the Moving Observer metaphor to be literal.

[18] "[...] In our terms, the idea that time is a linear sequence of points is metaphorical, a consequence of times seen as locations in the Moving Observer metaphor. The mistake, once again, is to take what is metaphorical as literal. Incidentally, a cognitive response to Zeno's paradox of the arrow is simple. There is a part of the brain that detects motion. Our motion detectors identify the arrow as moving. That is, our brains give us multiple ways of perceiving and conceptualizing the world. Motion is not a metaphorical concept. The idea that time a linear sequence of finite points is [*sic*]. Our direct nonmetaphorically structured experience provides a simple response: Of course the arrow is moving. But in addition, we have an unconscious metaphorical conceptualization of instants of time as locations in space. We use this, for example, when we comprehend a picture of a moving object at a time: 'This is Sam driving by directly in front of our house at 10:06 p.m.' In other words, we have more than one way to conceptualize motion—one literal and one metaphorical. We can conceptualize motion directly, as when we think of Sam driving by and the hands of the clock moving. We can also conceptualize motion using a metaphorical conceptualization of time as a line with point locations on it. In the metaphor, and only in the metaphor, there is temporal location. Relative to the metaphor, we can fix a point location in time. Within the metaphor, at that point location, there can be no motion, since motion can only occur over regions of time in the metaphor. The appearance of paradox comes from attributing real existence to metaphorical point locations. Zeno's brilliance was to concoct an example that forced a contradiction upon us: literal motion and motion metaphorically conceptualized as a sequence of fixed locations at fixed points in time." (Lakoff–Johnson *op.cit.*, 157–8; emphasis as in the original)

Thus we have seen how the use of (2) facilitates the solution of a problem raised in Lakoff and Johnson's approach.

2.5. Summary

The considerations put forward and illustrated by the above examples boil down to the following claim to be considered as an auxiliary hypothesis which is **the answer to (P1)** and which corresponds to one of the stages in the argumentation whose result will be (H):

(H1) Chomsky's generative linguistics, the two-level approach and Lakoff and Johnson's theory **do** make use of (1) and (2).

As already mentioned, (H1) clearly motivates the dilemma (D) we raised in section **1**. One way to handle (H1) would be, of course, to reject all of the three approaches, because they make substantial use of patterns of inference which the "received view" of the analytical philosophy of science considers to be invalid. Nevertheless, as we have mentioned, such a decision would be unreasonable, because it would lead to the rejection of theories which otherwise are undoubtedly workable and successful.

So, let us consider another possible solution already put forward in (H): namely, the claim that it is **not** the theories at issue which are illegitimate, but rather, it is the principles of rationality presupposed by the "received view" of the analytical philosophy of science that may be questioned. This second way of treating the problem is not unmotivated at all: in fact, recent investigations into the nature of scientific inquiry have shown that although strict logical validity may be a reasonable requirement in certain contexts, in many relevant cases it cannot be realized in scientific practice.

Accordingly, we will outline an approach whose aim is to capture certain aspects of this state of affairs. We will have to show three things:

(i) In contrast to (RV) (see section **1**), **not all** non-demonstrative inferences are fallacies.

(ii) In the context of the theories at issue (1) and (2) are **non-fallacious non-demonstrative** inferences.

(iii) In particular, it is possible to distinguish between two sorts of non-demonstrative inferences, namely, **plausible inferences** and **fallacies**.

3. Preliminaries to a theory of plausible reasoning

3.1. The problem

As is well known, the "received view" of the analytical philosophy of science maintains that the "context of discovery" — that is the process of problem solving—is beyond the scope of rationality and cannot therefore be captured by the philosophy of science (see (RVc)). In contrast, it is the "context of justification" — that is the reconstruction of the logical structure of well-developed theories — which constitutes the subject matter of the philosophy of science, because it is only the presentation of fully developed theories that is expected to follow the principles of rationality.

However, during the 1970's the distinction between the "context of discovery" and the "context of justification" was seriously questioned (Nickles 1980; 2001). The focus of interest changed gradually for philosophers of science: the processes of theory development also became an interesting research topic beside the justification of theories. In fact, the distinction between the two phases has been largely given up. This shift of emphasis had several independent sources.

Firstly, in many empirical disciplines the exposition of the results of research also reflects the way the corresponding problems were solved and remains strongly argumentative in nature. In this case very often even the final form in which the results are presented makes substantial use of non-demonstrative rather than demonstrative inferences. Mainly due to the pioneering work of Polya and Rescher, the assumption was formulated that in empirical disciplines it is **plausibility considerations** rather than strict logical validity that play a central role. Accordingly, the philosopher of science has to go beyond those purely formal considerations which demonstrative inferences permit and enter the realm of plausible reasoning.

Secondly, the role which **inconsistency** plays in scientific inquiry was acknowledged. From the seventies on different attempts to handle inconsistency by developing different approaches to paraconsistent logics were made (for recent overviews, see e.g., Meheus 2002 and Bremer 2005).

Thirdly, the development of artificial intelligence research gave rise to views which considered scientific inquiry as a **process of problem-solving** to be modelled by heuristics based on computer programmes.

In spite of the fact that these tendencies emerged independently of each other, they point in the same direction: some basic tenets of the "received view" of the analytical philosophy of science with respect to in-

ferences in scientific theories are no longer acceptable. The central notions which may outline a new perspective are "problem solving", "discovery", "plausible inferences" and "inconsistency". On this background, it is fully legitimate to hypothesize that it is plausible inferences that might provide us the key to capturing these phenomena.

Although the pioneering activity of George Polya and Nicholas Rescher showed convincingly the relevance of plausible inferences and revealed basic aspects of their structure and functioning, and although these achievements have been unquestionably acknowledged, the individual sciences have not paid as much attention to them as they deserve:[19]

> "**Plausible reasoning is pervasive in daily life as well as in scientific activity.** While inductive reasoning and probabilistic thinking have been the object of much interest among psychologists for a long time, the frequent case where people process **uncertain premises and draw an uncertain conclusion** [...] **has remained relatively neglected.** This is so despite the recognition of its importance by logicians and mathematicians [...] (Rescher 1976) and by philosophers [...] and the development of non-monotonic reasoning formalisms in Artificial Intelligence." (Politzer–Bourmaud 2002, 346; emphasis added)

According to the literature, non-demonstrative inferences include, for instance, inductive, analogical, abductive, defeasible, presumptive and plausible inferences. However, there is no generally accepted interpretation of these terms. This results in a kind of terminological vagueness which we have to live with. For example, in certain cases the term "plausible inferences" is treated as the genus proximum of inductive, analogical and other sorts of non-demonstrative inferences and excludes only fallacies from plausible reasoning. In other cases plausible inferences are considered to form a special class within non-demonstrative inferences as alternatives to inductive, analogical and abductive inferences. Following Polya and Rescher, we will maintain the standpoint mentioned first.[20] Since the scope of the present paper does not permit the discussion of the arguments for this decision, let us mention that D. Walton, J. R. Josephson and S. G. Josephson seem to argue for the same view as well.[21]

In what follows we will show that Polya's and Rescher's ideas can be developed into a coherent approach to plausible inferences and fallacies

[19] Although Polya's and Rescher's ideas were published a couple of decades ago, they are still up to date. See e.g., Woods et al. (2000, 258), Walton (2001; 1992b), Chesñevar et al. (2000), etc.

[20] Cf. Polya (1954, Preface), Rescher (1976).

[21] Cf. Walton (2001).

which differs from the "received view" in several respects. So as to put forward our approach, we will focus on the following question:

(P2) What are plausible inferences, that is, how can they be distinguished from
  (a) demonstrative inferences on the one hand,
  and
  (b) fallacies on the other hand?

It is worth illustrating the nature of the problem by an instructive example. Traditionally it is assumed that one of **the classical fallacies** is "affirming the consequent" which can be contrasted with the valid inference form of *modus tollens* on the left. The main difference between the two inference patterns, in this view, is that while *modus tollens* is deductively valid, the inference pattern on the right is invalid although it **seems** to be correct, because it resembles *modus tollens.*

A implies B	**A implies B**
B false	**B true**
A false	**A true**

It is instructive to observe that the very same pattern on the right is considered by Polya (1948, 221) **not as a fallacy**, but as the paradigm example of plausible inferences called "reduction" which he treats as the simplest and most frequently used pattern of plausible reasoning. Let us compare the traditional characterization of the pattern on the right side of the above table with Polya's considerations:[22]

"[...] let us consider the 'modus tollens' of the 'hypothetical syllogism' [...]:

A implies B
B false
A false

Even from a quite primitive standpoint, we can see various remarkable features in this pattern of reasoning: it is **impersonal, universal, self-sufficient, and definitive**. [...] Let us compare the pattern of demonstrative reasoning (the 'modus tollens') [...] with the pattern of plausible reasoning [...]:

[22] The situation is even more complex. For example, just to mention one aspect, because the pattern at issue is also held to be a typical example of abduction. We cannot go into a discussion of the relationship between abductive and plausible inferences. See Walton (2001) for a concise overview.

A implies B
B true

A more credible

Between these two patterns, the 'demonstrative' and the 'plausible', there is a certain outward similarity. (The demonstrative is traditional, and the other has been fashioned after it, of course.) Yet let us compare them more thoroughly.

Both patterns have the same first premise

A implies B

The second premises

B false $\qquad$ B true

are just opposite, but they are equally clear and definite; they are on the same logical level. Yet there is a great difference between the two conclusions

A false $\qquad$ A more credible

[...] The conclusion of the demonstrative pattern is on the same level as the premises, but the conclusion of our pattern of plausible reasoning is of different nature, less sharp, less fully expressed."

(Polya 1954, 112–3; emphasis as in the original)

The comparison shows that Polya's (and following him, Rescher's) main idea is that although in certain non-demonstrative inferences it is not the case that the conclusion is true whenever the premises are true, the latter may contribute to the **credibility** of the former. That is, the pattern called "affirming the consequent" is traditionally considered as a fallacy, **because** it is deductively not valid. Polya claims that the same pattern leads to a credible conclusion and therefore, **although** not deductively valid, it is fully legitimate.

In a similar vein, Walton argues that purely formal considerations are not enough to differentiate between correct and fallacious arguments:

"Many of the so-called fallacies, on closer inspection, turn out to be instances of argumentation that are defeasible, or opinion-based cases of **presumptive reasoning**, but inherently **reasonable**." (Walton 1991, 216; emphasis added)

Accordingly, if it is only the form of inferences that is focused on, then one excludes inferences from the legitimate tools of reasoning which are (in whatever sense) "inherently reasonable" in spite of being non-demonstrative. Therefore, one of the difficulties of answering the questions in (P2) is that the distinction between demonstrative, plausible and fallacious inferences cannot rest solely **on the form** of inferences. Consequently, in what follows we will show how (P2) can be solved if the examination of inferences is not restricted to their formal aspects.

3.2. On (P2a): plausible and demonstrative inferences[23]

Comparing the demonstrative inference with the plausible one mentioned in the last quotation by Polya, we may observe that while with demonstrative inferences the truth of the conclusion follows from the truth of the premises with **certainty**, the premises of plausible inferences contribute only to the **credibility** of the conclusion. That is, firstly, as opposed to the certainty of demonstrative inferences, plausible inferences are **uncertain and fallible** (Polya 1948, 221; Walton 2001, 159, etc.).

Secondly, demonstrative (i.e., logically valid) inferences cannot lead to knowledge that goes beyond the information content of the premises. In contrast to this, plausible inferences are frequently used **effective tools of acquiring new knowledge** in mathematics, scientific inquiry and everyday life (Polya *ibid.*), because their conclusion may contain information not included in the premises.[24]

Thirdly, this kind of effectivity is closely connected to their **heuristic** function. As is well-known, demonstrative inferences are not suitable for bringing about decisions between alternative solutions to a given problem

[23] For more detailed discussions of our approach to plausible inferences with special focus on inconsistency, see Kertész (2004b), Kertész – Rákosi (2005b), Rákosi (2005). The following considerations are a brief summary of section 2 in Kertész – Rákosi (2005c).

[24] Cf. Ruzsa (2000, 17):

> "Knowledge obtained by logical inference is only relatively new: it must have been hidden in the premises, because otherwise it could not be the strict logical consequence of our premises. [...] It is impossible to gain totally new knowledge by logical inference."

However, it is important to remark that although the information content of the conclusion of a demonstrative inference cannot go beyond that of the premises, it makes implicit information explicit. This is one of the reasons why demonstrative inferences may be used for the solution of problems.

which mutually exclude each other, but each of which is motivated by certain considerations with respect to the information available.[25] In this respect, too, they differ significantly from plausible inferences, because the latter help us make decisions between alternatives on the basis of plausibility considerations. Accordingly, plausible inferences contribute to the solution of the problems raised (Polya 1948, 102f; Polya 1954, 140f; Walton 2001, 164).[26]

Fourthly, they are **dynamic**, because the conclusion of a plausible inference changes monotonically whenever one of its premises changes monotonically, and because such a change is continuous as well (Polya 1954, 26, 41; cf. also Walton 2001, 161). Therefore, there is a close relationship between plausible and demonstrative inferences:[27]

> "[...] our pattern of plausible inference has a **'limiting form', which is a pattern of demonstrative inference.** As the premises of the plausible inference 'tend' to the corresponding premises of the limiting form, the plausible conclusion 'approaches' its extreme limiting strength. Still shorter: **there is a continuous transition from the heuristic pattern to a demonstrative pattern.**" (Polya 1954, 42; emphasis added)

Fifthly, the premises of demonstrative inferences constitute a "complete basis", because "[i]f we receive some new information that does not change our belief in the premises, it cannot change our belief in the conclusion" (Polya 1948, 223). In contrast, the premises of plausible inferences make up only a "**partial basis**". This means that the complete basis has a part which is not expressed through the premises and which is, in this sense, "invisible".[28]

[25] Cf. Rescher–Brandom (1979, 160).

[26] The most renowned Hungarian logician characterizes the nature of deductive logic as follows:

> "Logic in most cases cannot provide an exhaustive answer to the question 'What conclusion can be drawn from it?,' as a certain aggregate of premises may support an infinite number of conclusions. What usually lies behind the question just quoted is the problem of what should be the next appropriate and desirable step during the relevant reasoning, demonstration or argumentation. Logic sometimes presents a basis for the answer, it delineates alternatives, but it **cannot** provide a universally valid method. It can **only** give an answer to the question of whether another proposition is a logical consequence of the given propositions or not." (Ruzsa 2000, 17; emphasis added)

[27] See Tables 1 and 2 in section **3.5** for illustrations.

[28] Let us illustrate this by a longer quotation, to which we will continuously refer in the sequel:

Accordingly, sixthly, the conclusions of plausible inferences are **context-dependent** in a substantial and non-trivial way. The reason is that the credibility of conclusions cannot be established "absolutely", but depends significantly on the "strength" or "weight" (Polya's terms) of the premises. How credible a conclusion is can be judged only relative to the premises in particular and the properties of the partial basis in general (Polya 1954, 115f; Rescher 1976, 111ff; Walton 2001, 164).

Seventhly, while demonstrative inferences are **formal** in that they tell us that the conclusion is true if the premises are true, plausible inferences also take the **content** of the premises into consideration.

3.3. On (P2b): plausible inferences and fallacies

After we have differentiated between demonstrative and plausible inferences, the next question to be answered is how to distinguish between **plausible inferences** and **fallacies**, because both are non-demonstrative inferences. According to the classical view, a fallacious argument seems to be deductively valid whereas it is not (see e.g., Hamblin 1970, 224; cf. Woods–Walton 1989; Hansen–Pinto 1995). However, in the literature a couple of problems have arisen which undermine the acceptability of the classical view (see also van Eemeren–Grootendorst 2004, 158):

(i) In many cases the fallacy does not have a form which is similar to a valid inference pattern. For example, fallacies of the type "argumentum ad baculum" rely on the threatening of the opponent which is an ethical fault rather than a logical one.

> "[...] the premises constitute only one part of the basis on which the conclusion rests, the fully expressed, the **'visible' part** of the basis; there is an unexpressed, **invisible part**, formed by something else, by inarticulate feelings perhaps, or by unstated reasons. In fact, it can happen that we receive some new information that leaves our belief in both premises completely intact, but influences the trust we put in A in a way just opposite to that expressed in the conclusion. To find A more plausible on the ground of the premises of our heuristic syllogism is only reasonable. Yet tomorrow I may find grounds, not interfering at all with these premises that make A appear less plausible, or even definitively **refute** it. The conclusion may be shaken and even overturned completely by commotions in the **invisible** parts of its foundation, although the premises, the **visible** part, stand quite firm."
>
> (Polya *op.cit.*, 223f; emphasis added)

(ii) In other cases the fallacy has a valid form. For example, the inference of the form "A, therefore A" is trivially valid but commits the fallacy of *petitio principii.*

(iii) There is a large group of fallacies which contain a premise the acceptability of which can be questioned. For example, the fallacy "argumentum ad populum" relies on the argument that a statement is true because most people agree with it.

(iv) The classical view is too restrictive, because it considers non-demonstrative inferences as fallacies although both in scientific and everyday argumentation different kinds of non-demonstrative inferences are made use of.

Owing to these developments, the classical definition of "fallacy" has to be given up. There is wide agreement about this in argumentation theory; nevertheless, it is also clear that in connection with fallacies "most new theories are still in an embryotic stage, so it is too early to make any balanced judgements" (van Eemeren et al. 1996, 74). Therefore, we are in no position to find a satisfactory definition in the literature. Nevertheless, in the literature there are clear shifts of emphasis which we can use as points of departure.

Firstly, one of the objections raised against the classical definition of a fallacy is that "'validity' is incorrectly presented as an absolute and conclusive criterion" (van Eemeren–Grootendorst 2004, 158). Correctness has a much wider scope than deductive validity, because not only deductive but other kinds of inferences may be correct in some sense as well: "[...] fallacy is an inference that falls short of some standard of **correct** inference (deductive, inductive, or whatever)" (Walton 1997, 212; emphasis added).

Secondly, in connection with this, what matters is not the valid vs. invalid **form** of an inference, but rather, the way a certain inference has been used in a given **context** of reasoning:

> "If an argument is an instance of an invalid form of inference, it does not follow that the argument must be invalid. Whether the argument is fallacious or not depends on whether and how that form of inference has been **used in the context** of a dialogue." (Walton *op.cit.*, 213; emphasis added)

Thirdly, this kind of context-dependency of fallacies seems to be particularly interesting with respect to the fact that, as we have seen in the previous subsection, plausible inferences are context-dependent, too. Therefore, at this point we may refine the question asked at the beginning

of the present subsection: How can we distinguish between plausible inferences and fallacies, **if** both are (a) non-demonstrative and (b) context dependent?

The answer seems to follow immediately from our approach to plausible inferences. As mentioned in the previous subsection, Polya considers plausible inferences to be indispensable heuristic tools of gaining new knowledge about the world. For Polya, the heuristic potential of inferences necessarily means their **effectivity**, or, to use an alternative expression in the same sense, **constructivity**: that is, their capability of bringing us nearer to the solution of a given problem in a given informational state. This boils down to the claim that the context-dependency of plausible inferences amounts to their effective use for the solution of the problems raised on the basis of the information available. Consequently, a **fallacy** arises if the use of a given pattern of inference is **ineffective** with respect to the heuristic tasks it is expected to fulfil. Thus, the answer to the question of how to draw the dividing line between plausible inferences and fallacies is that what primarily matters is effectivity: **whereas plausible inferences are effective tools of acquiring new information in a certain context of argumentation, fallacies are ineffective and sometimes even destructive.** This distinction is not specific to the framework we have outlined by relying on Polya's and Rescher's classical views. For example, van Eemeren and Grootendorst put forward a similar standpoint, although the argumentation theoretical framework they developed differs from ours:

> "[...] fallacies are not 'absolute' mistakes that can simply be attributed to discussants by an analyst who penetrates the 'essence' of reasonableness, but moves in an argumentative discourse or text that can be characterized as **less than constructive, or even destructive** [...]."
>
> (van Eemeren – Grootendorst 2004, 175; emphasis added)

To avoid misunderstandings and unmotivated generalizations, at this point three remarks have to be made. The first is that effectivity in the sense just mentioned is not an absolute property of inferences. Even if in one context of reasoning an inference seems to be effective — because it appears to further the solution of some problem — in the light of new information, with respect to the new context thus modified it may turn out to be ineffective. Secondly, it is important to emphasize once more that the distinction we have just drawn reveals a shaded and subtle characterization of fallacies, but it does not provide us with a universal and in all situations clearly applicable criterion for judging whether a

certain inference is fallacious or plausible. For example, an inference may have multiple effects: while it solves a particular problem, it may give rise to another one which perhaps cannot be solved on the basis of the information given. Or, it may generate a contradiction between such a solution and previously accepted theses of the theory which may either undermine the theory or, in contrast, further its development. Moreover, the evaluation of such reasoning itself is rooted in a partial basis, too. Accordingly, the evaluation of scientific reasoning itself is a process of plausible (meta)reasoning, which does not lead to final results, either. Rather, all this provides us only with fallible, uncertain findings which may seem plausible at a certain point of reasoning but can be rejected or revised in the light of later considerations.[29] Thirdly, it is important to emphasize that although our approach shares many features with other approaches to argumentation theory, there are significant differences between our standpoint and that of other authors.[30]

[29] The notion of "context" within our approach to plausible reasoning will be explained in the next section.

[30] Without an attempt to present a detailed discussion of the literature, we only wish to indicate briefly in what aspects our approach is different from other standpoints.

For example, although in the present paper we have cited Walton approvingly several times and used quotations from his works to support our claims, there are also clear differences between our approach and his. To illustrate this, let us mention that Walton seems to agree with the "received view" of the analytical philosophy of science in so far as he accepts the substantial difference between "the context of discovery" and "the context of justification". This distinction is reflected in his view of the argumentation structure of these two phases of inquiry. He assumes that in "the context of discovery" the use of non-demonstrative inferences is permitted, whereas — because of their uncertainty — in the "context of justification" they must not be applied and only deductive and inductive inferences are justified (Walton 1992a, 207f; 2001, 157ff, 164f). Cf. Rákosi (2005) on this.

Or, to mention another example, we highly appreciate van Eemeren and Grootendorst's seminal contribution to argumentation theory and often agree with their conclusions. However, we do not share their idea that the analysis of fallacies should be based on normative models of argumentation which are nothing else but "well-defined systems of rules for the resolution of differences of opinion that the discussants intersubjectively accept" (cf. e.g., van Eemeren – Grootendorst 2004, 175).

From Polya's work our approach differs mainly in that we extend his basic ideas to the handling of inconsistency (Kertész – Rákosi 2005b) and fallacies. The main difference between Rescher's and our approach is that while Rescher focuses on plausibility metrics, our approach centres on patterns of plausible inference.

What we have just said applies to (1) and (2) as well. They are non-demonstrative inferences which may be fallacious in one context, but correct in another: "Inference from a property of the part to a property of the whole is warranted only in some cases." (Walton 1997, 213)[31]

3.4. On the epistemological framework of plausible reasoning

The way plausible inferences work cannot be understood without outlining the overall epistemological framework which interprets the technique we sketched in sections **3.1** and **3.2**.

Let us remember that plausible inferences are rooted in a partial basis. Starting from such a partial basis, we apply certain methods so as to arrive at new pieces of information, while we cannot make sure that the latter will really result in claims consistent with our initial assumptions. In such cases we reason **cyclically.** That is, we start off from a partial basis; then we return to the problems in question again and again, and supplementing the partial basis with different latent background assumptions we transform the set of information at our disposal by drawing additional plausible inferences, and re-evaluate the credibility of the respective hypotheses. During these cyclic returns we aim to filter out hypotheses unacceptable for some reason gradually, according to different — possibly contradictory — considerations (Rescher 1976, 111f, 118; Rescher 1987, 304). In this way it becomes possible to compare one's cycles and to assess one's progress.

From this starting point four very important consequences follow. The first is that, according both to Rescher and Polya, scientific inquiry proceeds not only cyclically, but also **prismatically**. This means that inasmuch as one tries to approach the given problem from several points of view during the cycles of reassessing what is known (Rescher 1987, 306f, 313; Polya 1981, 68), the cycles continuously change the point of view from which the information at our disposal is evaluated.

Secondly, due to its prismatic nature, the cyclic process of continuous **retrospective revalidation** does not yield vicious circularity, because cyclic reasoning never returns to the same stage.[32]

[31] Of course, the same applies to inferences from properties of the whole to properties of the part.

[32] "The sort of 'self-criticism' at issue does not reflect any **vicious** or **vitiating circularity**, but in effect amounts simply to a **feedback** process that uses later, more

The third consequence is that the cyclic and prismatic procedure of scientific inquiry can be best understood if we imagine it as a kind of double helix in the sense of Figure 2.[33]

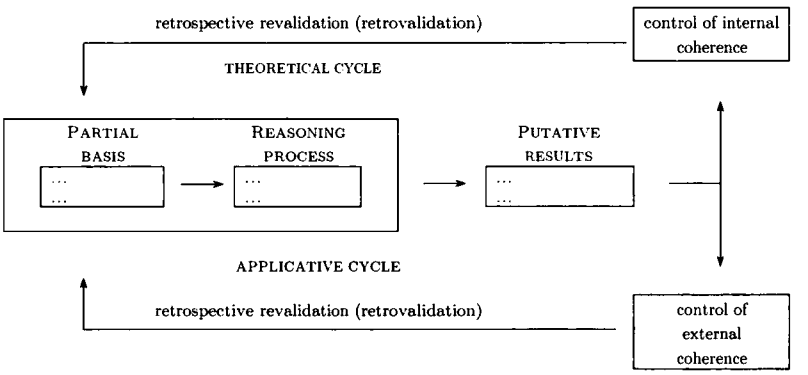

Fig. 2

Starting from the information in the partial basis one obtains new information by drawing plausible inferences. These results are, however, only **putative**, that is, their credibility has increased during the reasoning process, but they are still only plausible and not certain. Since consistency has to be established, it is unavoidable to control at least two things. First, whether the putative results are consistent with all the other claims in the partial basis of the theory (control of internal coherence). Second, it has to be checked, too, if the putative results are consistent with the "empirical" (whatever this term means) data (control of external coherence). If one or both of the two questions are answered negatively, it has to be decided—by the use of plausible inferences again—which parts of the basis have to be given up or modified and which further background assumptions should be added.

The aim of this cyclic and prismatic process of retrospective revalidation is primarily to rule out inconsistency and to arrive at a consistent set of assumptions. In this sense, the model we have just sketched, does not deny the basic values of rationality advocated by the "received view"

refined stages of the analysis to effect revisionary sophistications in the materials from which earlier stages proceeded. One indeed returns to 'the same point' but does so **at a different cognitive level.**" (Rescher 1976, 119; emphasis as in the original and added)

[33] Figure 2 is based on suggestions in Rescher (1977, 122) and Rescher (1979, 103), but the terminology has been adapted to the notions we introduced in section **3.2.**

of the analytical philosophy of science; however, it considers them to be **ideals** which one should strive for but which normally cannot be realized. Thus, the fourth very important consequence of our approach to plausible reasoning is that scientific rationality must not be reduced to the use of demonstrative inferences; rather, it should be extended to capture plausible inferences as well.[34] It does not follow from the fact that the conclusion of plausible inferences is not certainly true—but only credible, fallible, context-dependent—that plausible inferences are not rational. This highly important aspect of our model is, of course, in sharp contrast with the "received view" which restricts "rationality" to deductive inferences (and probabilistically based inductive inferences, at best).[35]

[34] "But in going beyond the purely formal considerations of logic [...] plausibility theory **does not go beyond the limits of rationality**. [...] it aims at **rational** alignment and coordination of inferences." (Rescher 1976, 5; emphasis added)

[35] This attitude is expressively characterized by Walton:

> "[...] it is very hard to get modern readers to come to accept plausible inference as having any hold on rational assent at all. We are so accustomed to the basing of our notion of rationality on knowledge and belief, we tend to automatically dismiss plausibility as 'subjective', and therefore of no worth as evidence of the kind required to rationally support a conclusion. The modern conventional wisdom is used to thinking of rationality as change of belief or knowledge guided by deductive reasoning and inductive probability. This modern way of thinking finds the notion of plausibility alien or even unintelligible, as an aspect of thinking." (Walton 2001, 151)

Such an anachronistic attitude is one of the **typical, unreflecting and outmoded** methodological background assumptions underlying most linguistic theories, as already mentioned in section **1**. In fact, most mainstream linguistic theories **presuppose** the concept of rationality associated with the "received view", while in **doing** linguistics they make substantial use of plausible reasoning. That is, in so far as they declare to accept the standards of the "received view", they have to be evaluated as **irrational by their own standards**. Consequently, this seems to be a contradiction which they cannot resolve by their own means within their own framework. Therefore, in this respect, such theories—and, among them, all the stages of generative linguistics and the two-level approach—are essentially **paraconsistent**.

Nevertheless, the situation is, of course, much more complicated than the above quotation and our comment suggest. For example, the fact that plausible inferences may be considered to be rational, does not exclude the assumption that they correspond to different standards of rationality than deductive and inductive reasoning in scientific theories. Examining this problem would require a detailed comparison of Walton's, Rescher's and our view which would be beyond the limits of the present paper.

Finally, let us—without defining it—explain in what sense in our framework the notion of "context" will be used. In accordance with Rescher and Polya, by "context" we will mean the whole of the information which is at one's disposal in a certain moment. In other words, the context includes all the hypotheses which seem to be plausible at a given stage of reasoning. This means that not only empirical hypotheses, but also background assumptions of other sorts such as methodological norms, patterns of inferences etc. are included in the context as well. Accordingly, in scientific theories **the context changes continuously**, because in the course of the cycles of reasoning one may obtain new information by the use of the method applied, or one may also give up some of the hypotheses accepted in one of the previous cycles, or one may assume new hypotheses, or the method can be changed, etc. For example, in Figure 2 the "context" of a certain assumption in the partial basis at a certain moment is the rest of the partial basis. Or, the context of the "putative results" includes the partial basis and the methods applied in this cycle—thus, in our case, the inferences (1) and (2). However, as soon as a cycle is closed, the context is supplemented by all the results provided by the whole cycle at issue. Because these results may contradict certain elements of the partial basis, it may be the case that one has to revaluate the hypotheses accepted previously. Accordingly, in this way the context may change again.

3.5. Summary

In section **3** we sketched an approach to plausible reasoning by distinguishing between three kinds of inferences: demonstrative, plausible and fallacious ones. This means that we argued for giving up the dichotomy "fallacy vs. demonstrative inference". See Figure 3 for this dichotomy.

valid inferences	**invalid inferences**
demonstrative inferences	non-demonstrative inferences: – plausible inferences – fallacies

Fig. 3

Rather, we suggested treating both demonstrative and plausible inferences as correct ones and assuming that non-demonstrative inferences

consist of at least two subgroups, namely, fallacies and plausible inferences as illustrated in Figure 4.

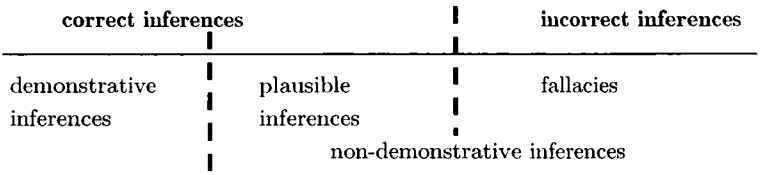

Fig. 4

Consequently, we may summarize our next auxiliary hypothesis as follows which is an answer to the question (P2):

(H2) (a) The distinction between demonstrative and non-demonstrative inferences rests on the **certainty** vs. **uncertainty** of the conclusion.

(b) Within non-demonstrative inferences, the distinction between plausible and fallacious inferences depends on the particular **context** of reasoning. The criterion is the **effectivity** of the inference within the context given.

However, the distinctions we have made do not mean that there is no link between these kinds of inferences:

(i) As we have shown in section **3.2**, patterns of plausible reasoning can be seen as tending to the corresponding patterns of demonstrative inference when the credibility of the premises tends to certainty. As far as the premises of plausible inferences approach certainty, so, too, does their conclusion.

(ii) An analogous relation holds between plausible inferences and fallacies: the latter are nothing but plausible inferences deemed ineffective in a certain context of argumentation. If we give up the static view of fallacies that focuses on the form of inferences only, and try to consider the content of arguments by interpreting them dynamically, then fallacies are seen in a new light. They appear to be extreme cases on a scale: they are obtained from plausible inferences in that one moves towards contexts of argumentation in which these structures work less and less effectively.

In sum, we assume that reasoning centres on plausible inferences from which one can move towards two extremes: demonstrative and fallacious ones (Figure 5). From another point of view this means that, since the form of an inference itself does not decide whether it is plausible, demonstrative or fallacious, the dividing lines between these categories are not fixed either, but they are in constant motion depending on the particular context of reasoning.

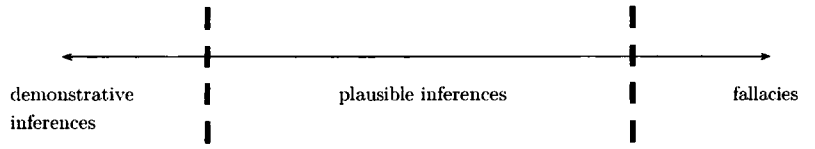

Fig. 5

Let us illuminate this system of inferences by two further remarks. Firstly, for example, *modus tollens* or *modus ponens* are demonstrative, if the premises are certain and, consequently, the conclusion is certain, too. We obtain, however, different cases of what Polya (1954, 23ff) calls **shaded *modus tollens*** or **shaded *modus ponens*** as soon as—while the form of the inference is the same—the premises and via the premises the conclusion, too, are not certain, but only credible to a particular degree. Furthermore, if for example a premise is held to be true although it is not because it overgeneralizes (i.e., when its plausibility is misjudged),[36] then the conclusion will be faulty and the inference has to be evaluated as a fallacy. That is, the transition between these categories is clearly context-dependent, while plausible inferences can approach two extremes continuously. See Tables 1 and 2 (overleaf) as illustrations of the transition between the categories mentioned.[37]

Secondly, it is worth emphasizing that our model fits smoothly into current tendencies of inference research. For example, in summarizing the main findings of modern approaches to fallacies, Kienpointner emphasizes the following as one of the key points:

> "Der Übergang von plausibler zur trugschlüssigen Argumentation ist gradueller Natur, wobei für die entsprechende Einstufung von Argumentation stets der [...] Kontext zu berücksichtigen ist. [...] Die Ermittlung von Trugschlüssen ist nur im Rahmen einer umfassenden Theorie der 'fallacies' möglich, die festlegt, was als 'fallacy' zählt und was nicht." (Kienpointner 1992, 249–50)

Since many further aspects of Kienpointner's approach to plausible inferences differ substantially from Polya's, Rescher's and ours, the above statement serves as an independent argument for our model of fallacy.

[36] In section **4.4** we will discuss such a case.

[37] We have to remark three things. First, the second premise of each inference in the tables involves a comparison between the credibility of a piece of information (A resp. B) in a given moment and its credibility at a former informational state. Second, it is important to emphasize that there are many versions of each plausible inference pattern, because not only the second premise can be uncertain but the first one or both premises as well. Third, there are of course many different stages in the continuum and therefore, many different degrees of credibility/uncertainty.

Table 1

demonstrative	shaded plausible		plausible	fallacy
Premises:	**Premises:**	**Premises:**	**Premises:**	**Premises:**
It is certain that if A, then B	It is certain that if A, then B	It is certain that if A, then B	It is certain that if A, then B	It is certain that if A, then B
B is certainly false	B has become less credible	B has become more credible	B has turned out to be true	B is certainly true
Conclusion:	**Conclusion:**	**Conclusion:**	**Conclusion:**	**Conclusion:**
A is certainly false	A has become less credible	A has become somewhat more credible	A has become more credible	A is certainly true
modus tollens[38]	**shaded *modus tollens***	**shaded reduction**	**reduction**	**affirming the consequent**

Table 2

demonstrative	shaded plausible		plausible	fallacy
Premises:	**Premises:**	**Premises:**	**Premises:**	**Premises:**
It is certain that if A, then B	It is certain that if A, then B	It is certain that if A, then B	It is certain that if A, then B	It is certain that if A, then B
A is certainly true	A has become more credible	A has become less credible	A has turned out to be false	A is certainly false
Conclusion:	**Conclusion:**	**Conclusion:**	**Conclusion:**	**Conclusion:**
B is certainly true	B has become more credible	B has become somewhat less credible	B has become less credible	B is certainly false
modus ponens	**shaded *modus ponens***	**shaded refuting the antecedent**	**refuting the antecedent**	**denying the antecedent**[39]

[38] One might ask why the premises and the conclusion claim the certainty of the propositions at issue. Firstly, the formal structure of modus tollens is of course $\{A \supset B;\ \sim B\} \Rightarrow \sim A$. However, it is not sufficient to require formal validity only, because the inference has to be sound, too: "When an argument is valid, **and** all of its premises are true, we call it **sound**. The conclusion of a sound argument obviously must be true" (Copi–Burgess-Jackson 1996, 56). This means that (formal) validity alone is not enough to establish the truth of the conclusion—therefore, soundness, in other words, the certainty of the premises is required.

Secondly, we must not forget that we are discussing inferences **not** (to quote Quine) "from a logical point of view," but rather, from an argumentation theoretical point of view. That is, what we are focussing on is not pure logic, but **reasoning** which involves, among others, the way logic is **used**. The use of logic also means that it is not only the form of inferences that matters, but their content, too, even in the case of valid inferences. Therefore, from an argumentation theoretical point of view, the interpretation of modus tollens suggested in the first column of the table is, of course, fully justified.

[39] The pattern of refuting the antecedent is dynamic (in the sense of Polya, see section **3.2**), whereas that of denying the antecedent is not. The reason is that in the case of fallacies the second premise is not dynamic, because according to the traditional view inferences are static.

4. On the effectivity of (1) and (2)

4.1. The problem

After we have clarified the difference between fallacies and plausible inferences, the question arises whether (1) and (2) are made **a fallacious or a plausible** use of in the three theories we are examining. By definition, this question should be reduced to the problem as to the **effectivity** of (1) and (2) in the given theoretical contexts.

However, examining whole theories is a very complicated and lengthy matter, therefore the problem should be further specified. How can we test whether the use of (1) and (2) is effective or not? One—but certainly not the only—way is to argue as follows. Firstly, we will choose a well-known paradigm example of fallacies. Let this example be *petitio principii*, because it is known as a **typically ineffective** strategy which does not yield new insights and does not contribute to the solution of the problems raised. It is especially interesting that in the literature all three theories have been accused of committing the fallacy of *petitio principii*. Secondly, we will try to show that by the use of (1) and (2) this fallacy, which would occur otherwise, can be avoided. If we succeed in showing this, then we may conclude, thirdly, that (1) and (2) have been used effectively, because with their help an ineffective strategy of reasoning could be avoided and therefore the heuristic capacity of the theory has been restored. Accordingly, our next question is:

(P3) Can by the use of (1) and (2) in the context of the three theories the fallacy of *petitio principii* be avoided?[40]

If it can, then the theories we are examining may be—at least with respect to the use of (1) and (2), provisionally and partially—legitimized as scientific enterprises. If not, then one must conclude that they are false theories built on fallacious reasoning.

[40] By *petitio principii* we mean in accordance with our characterization of fallacies ineffective or even destructive circularity which does not result in any new knowledge and serves only as self-legitimization.

4.2. Generative linguistics

As regards generative linguistics, according to one of Chomsky's initial hypotheses, language is governed by rules. However, since this hypothesis cannot be tested by direct empirical evidence, the **risk of circularity** is relatively great:

> "Imagine a debate between radical regularists, like Chomsky, and moderate ones who are convinced that there is no regularity in language over and above the obvious cases of agreement, comparison of adjectives, etc. The opposing parties would soon be involved in **vicious circles.** [...] In fact, the very acceptability of the data relevant to the question seems to depend on a prior decision concerning the degree of systematicity of language. Hence the assumption of regularity cannot be regarded as a generalization from hard facts. **I would like to suggest that it may be understood, partly, in terms of Chomsky's views on human nature.** He thinks that creativity presupposes rules. So if language use is creative, it has to take place within a system of rules. Thus it might be the rules governing our creative activities where the principle of regularity comes from." (Forrai 1987, 51; emphasis added)

This kind of circularity can be avoided by the use of (2). In particular, as we have shown in section **2.2**, the principle which says that linguistic competence is governed by rules was inferred from the properties of human nature via (2). Therefore, the reasoning does not return to the same state, but to a qualitatively different informational state. Consequently, the reasoning is not viciously circular; rather, it is cyclic and rests on the retrospective revalidation of the partial basis.

Nevertheless, in other contexts the circularity arises again from different "prismatic" points of view. For example, it is instructive to observe that in certain contexts of argumentation Chomsky reverses the inferential relationship between human nature and linguistic competence. It is not only the case that he infers properties of the latter from properties of the former, but also vice versa:

> "Given the role of language in human life and probably human evolution, and given its intimate relations to what I have been calling 'common-sense understanding', it would not be very surprising to discover that other systems within cognitive capacity have something of the character of the language faculty and its products. We should anticipate that these other cognitive systems too set limits on human intellectual achievement, by virtue of the very structure that makes it possible to acquire rich and comprehensive systems of belief and knowledge, insight and understanding. I have already discussed this matter briefly in connection with the 'science-forming capacity' (whatever it may be)." (Chomsky 1976, 123)

Moreover, on the same page he also claims that even visual perception could have been chosen as a point of departure:

> "I would like to stress again that these conjectures should not seem in any way surprising to the natural scientist. Rather, they conform reasonably well to what is known about how the brain works in other domains, say, the construction of visual space and the objects in it. Furthermore, as a number of biologists have pointed out, something of the sort is to be expected on simple evolutionary grounds." (Chomsky *op.cit.*, 123f)

At a later point in the same work he reverses the direction of argumentation again:

> "If the approach to the study of cognitive capacity outlined earlier is a proper one, then we can hope to develop a theory of human nature in its psychological aspects. [...] No one would seriously argue today, for example, that our construction of perceptual space is guided by empiricist maxims. The same, I think, is true of the language faculty, which relates more closely to the essential nature of the human species." (*ibid.*, 125f)

Then he handles the study of linguistic competence and human cognition simultaneously:

> "Imagine a scientist, henceforth S, who is unencumbered by the ideological baggage that forms part of our intellectual tradition [...]. S might begin with the observation that people seem to act in systematic ways with respect to the objects around them and that they use and respond to expressions in organized ways. He might also conclude that humans, rather early in their lives, seem to arrive at steady states of development in these respects, states which provide a basis for human actions and responses. [...] S might now proceed to characterize these steady states, attributing to the organism two cognitive structures: (i) a system of beliefs and expectations about the nature and behavior of objects, and (ii) a system of language. Suppose he calls the first system 'common sense' and the second 'grammar'." (*ibid.*, 139)

Although these quotations suggest that Chomsky's argumentation still appears to be circular, the point is that the premises and the conclusions of the inferences of types (1) and (2) correspond to different informational stages and are thus "at a different cognitive level" (Rescher 1976, 119). The credibility of Chomsky's argumentation is significantly enhanced by the fact that inferences from the whole to the part and from the part to the whole are not restricted to **single properties**, but rather, affect a coherent network of properties. Accordingly, besides certain single properties, linguistic competence, human nature and society are related by **structural similarities**—that is by relations between corresponding elements—as well. Consequently, whole-part and part-whole inferences are

closely connected to **a system of analogical inferences** (see also the first quotation from Forrai in section **2.2**). In a nutshell, linguistic competence, human nature and society are governed by regularities; these regularities presuppose the creative behaviour of people; creativity, however, can be manifested in behaviour characterized by regularities; the regularities are not arbitrary, but can operate only within man's biological constraints; it is, however, these constraints that enable human beings to act freely and creatively. See Figure 6 as the extension of Figure 1 with respect to these relations.

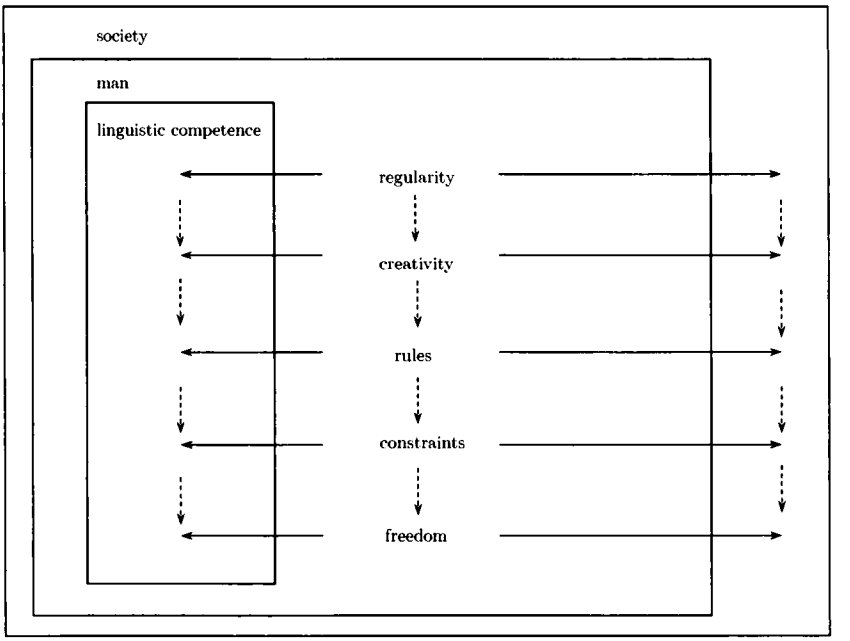

Fig. 6

These structural relationships facilitate the application of Chomsky's model of linguistic competence to other areas of cognition, and in doing so, he tests his hypotheses on the basis of continuously modified amounts of information. As long as his approach can be applied to other fields of human cognitive behaviour as well, all these assumptions clearly enhance each other's credibility. This means that as a result of drawing inferences along the lines of (1) and (2), a strong analogy between man, linguistic competence and society is established.[41]

[41] As Gentner and Markman emphasize, it is this systematicity that is responsible for the effectivity of analogical reasoning:

Consequently, our considerations seem to support the assumption that Chomsky's reasoning is cyclic and prismatic (see section **3.4**) rather than circular (Figure 7).

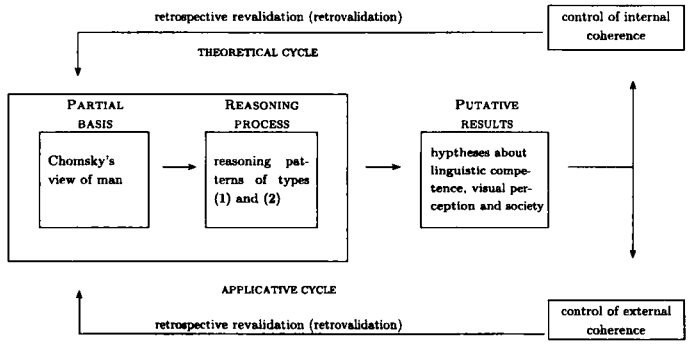

Fig. 7

This cycle can be supplemented by further pieces of information, for example, the basic assumptions of a certain version of generative grammar:

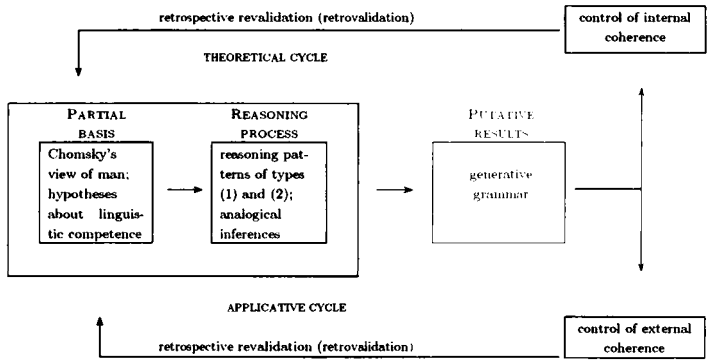

Fig. 8

> "The defining characteristic of analogy is that it involves an alignment of relational structure. [...] Analogies tend to match connected systems of relations [...]. A matching set of relations interconnected by higher order constraining relations makes a better analogical match than an equal number of matching relations that are unconnected to each other. The systematicity principle captures a tacit preference for coherence and causal predictive power in analogical processing."
>
> (Gentner–Markman 1997, 47)

Thus, the relationship between whole-part and part-whole inferences on the one hand and such a systematic use of analogies on the other hand, clearly increases the effectivity of the former.

Thus, (1) and (2) play an important heuristic role, because the basic background assumptions of the theory are obtained with their help.

So as to evaluate these findings, it is worth remarking that, however different the particular versions of Chomsky's generative grammar are, they remain within the boundaries of the inferences reconstructed in (3)–(9). For example, both the Standard Theory and GB Theory make substantial use of (3), irrespective of the fact that the content of the particular inferences is different. This means that although these versions focus on partly differing ideas—for example the Standard Theory focuses on rules, while GB theory centres on freedom within constraints and in the case of minimalism it is constraints that are emphasized—, in this respect, too, (1) and (2) play an indispensable role in Chomsky's theory. The reason they do so is that the frequent use of inferences which are manifestations of the patterns (1) and (2) belong to **the philosophical basis** of Chomsky's work. One might object that this philosophical basis is not constitutive of Chomsky's **linguistic** theory that focuses on the technical innovations widely applied by linguists. However, this objection is clearly unmotivated. Unfortunately, we cannot go into a detailed proof of the latter claim, therefore, let us substitute such a proof by the following quotation which nicely summarizes the main issue:

> "[...] many linguists (including many practicing generative linguists) seem not to take much interest in Noam Chomsky's general ('philosophical') writings on the nature of language. [...] Among such linguists, there appears to be a sense that Chomsky's more general thinking about the nature of human language (as opposed to his more specific work, for example, within the current Chomskyan model known as the Minimalist programme) represents merely 'the philosophical side of (Chomskyan) linguistics', an area that is viewed by many linguists as being, in some sense, an optional extra, distinct from, and not having any obvious direct bearing on, the business of getting on with doing linguistic analyses ('linguistics proper' as opposed to philosophy). This outlook is unfortunate, since **foundational ideas are surely what any significant linguistic theory is derived from. It is certainly the more general issues which drive Chomsky's thinking, and from which the Minimalist programme and all its predecessors are derived.**"
>
> (Carr 2003, 615; emphasis added)

Thus our argument is simple: if the use of (1) and (2) is effective for the philosophical foundations of Chomsky's theory and these foundations are effective for all the versions of this theory, then (1) an (2) are effective not only for Chomsky's philosophy, but also for his "linguistics proper".

4.3. The two-level approach

According to Müller (1991) the fallacy of *petitio principii* characterizes modular approaches to cognition generally:

> "Ein **logischer Fehlschluß**, der sich immer wieder in modularistischen Theorien der Kognitiven Wissenschaften finden läßt, ist die Interpretation forschungsstrategisch motivierter Abgrenzungen als realistische Aussagen über die Organisation von Geist und Gehirn. Daß wir die Welt oder unseren eigenen Geist vielleicht nur durch einen modularistischen 'Theoriefilter' erkennen können, bedeutet nicht, daß Welt und Geist modular sind."
> (Müller *op.cit.*, 407; emphasis added)

This applies to the two-level approach, too—all the more so, because its main empirical hypothesis says that "all human cognitive behaviour is organized in a modular fashion".

In the two-level approach very much depends on the assumption that there is a set of modules. However, proving the existence of relatively autonomous systems and subsystems is one of the most difficult tasks of modularism, because there is a substantial lack of empirical evidence (whatever "empirical evidence" may mean). Therefore, the two-level approach runs the risk of circularity as well. In particular, its proponents accept the empirical hypothesis that knowledge of language is based on the interaction of relatively autonomous systems, **because**, for methodological reasons, the object of investigation can be grasped only by systematic simplifications, namely, its subdivision into separate (sub)systems. At the same time, however, they accept the methodological principle that the object of investigation has to be subdivided into relatively autonomous systems, **because** they have accepted the empirical hypothesis, according to which knowledge of language consists of subsystems.[42] This circular reasoning seems to be clearly formulated for example in the following passage from one of the seminal works by Bierwisch and Lang:

> "Singling out autonomous subsystems of mental organization and specifying their content is based on the assumption that the structure and the functioning of cognitive systems do indeed have such a modular structure. **Autonomous subsystems and structural levels of the theory, from this factual point of view, correspond to autonomous subsystems in the actual structure of mental states and processes.** This actual structure, however, cannot be discovered directly but only in the form of explanatory theories. From this

[42] See Müller (*ibid.*) and Kertész (2004a) for a detailed discussion of the modularistic circle.

> theoretical point of view, identifying subsystems and explaining their autonomy, as well as finding out the nature of their interaction, **becomes an aspect of adequate theory formation**. Autonomous components of the theory are then justified (a) by the independence of the basic concepts, (b) by the internal structure of the theoretical components which the basic concepts enter and (c) by the possibility of formulating regularities in the framework of (a) and (b) which explain the facts on the appropriate level of abstraction." (Bierwisch – Lang 1989, 495; emphasis added)

However, research within the two-level approach can be seen as a series of cyclically proceeding plausible inferences, rather than being circular. Namely in section **2.3** we have shown that the two-level approach uses (1) and (2) as constitutive tools of theory-formation. Therefore, if one interprets the last quotation on the basis of the framework we introduced in section **3**, then it follows immediately that (1) and (2) contribute to the resolution of the circularity and to the generation of a cyclic and prismatic reasoning mechanism. Figure 9 is intended to illustrate the cyclicity of reasoning within the two-level approach.

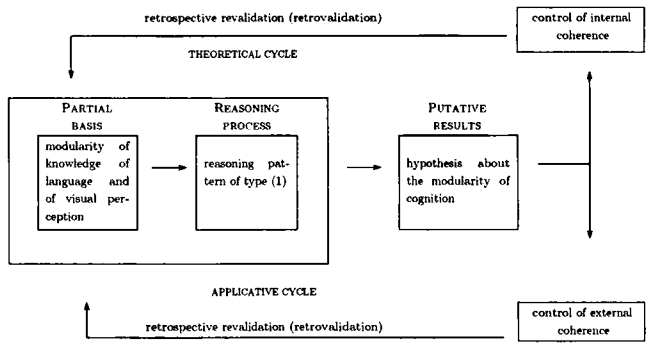

Fig. 9

Although at every point of the argumentation proponents of the two-level approach try to identify the major premises and to argue clearly on their basis, evidently we must not exclude the possibility that there is indeed an "invisible part" of the basis (see section **3.2**). This invisible part involves those assumptions of the two-level approach which one does not make use of in the argumentation explicitly and whose indirect consequences one cannot realize—for example the "empirical evidence" (in whatever sense) supporting the autonomy of what the two-level approach calls "semantic form". We may conclude that it is the particular argumentative context within the two-level approach that decides whether the applications of (1)

and (2) are plausible or fallacious, because (a) the modules whose existence the argumentation hinges on are heuristically motivated theoretical constructs, and (b) apart from the "visible basis" of the argumentation there is an "invisible basis" (in the sense of Polya 1948, 223f, quoted in section **3.2**), whose implications may be different from those of the visible one—for instance, if the "empirical evidence" turned out to refute the autonomy of semantic form and that of the conceptual module.

Therefore, the use of (1) is, due to the cyclic nature of the argument, clearly effective. That is, the application of (1) is to be interpreted as plausible rather than fallacious. This situation can be retained as long as the starting hypotheses—that is, the partial basis—are considered to be plausible. However, as soon as serious arguments arise against the modularity of the knowledge of language to which the theory cannot react convincingly, the plausibility of (1) has to be subjected to revision.

Moreover, as Figure 10 suggests, in later cycles the two level approach uses the assumption of modularity as a premise and thus applies (2), too (see also section **3.3**).

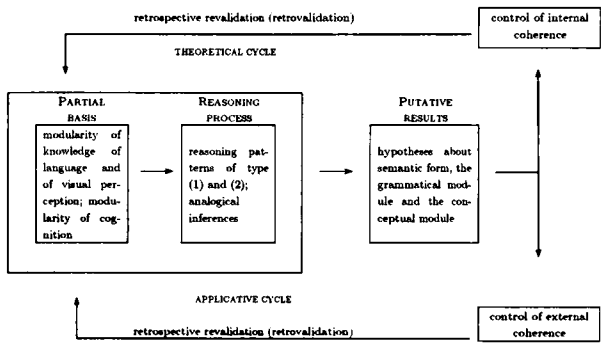

Fig. 10

4.4. The cognitive theory of metaphor

Critics of Lakoff and Johnson's approach have recently argued that the authors commit the fallacy of *petitio principii*. For example, Haser (2005, 145ff) enumerates and analyzes such cases in great detail; see also Murphy (1996, 183). To mention another source, McGlone accuses Lakoff and Johnson of the following fundamental error which he thinks clearly undermines their whole approach:

> "[...] Lakoff's claim that metaphors transcend their linguistic manifestations to influence conceptual structure rests solely on these manifestations. **How do we know that people think of theories in terms of buildings? Because people often talk about theories using building-related expressions. Why do people often talk about theories using building-related expressions? Because people think about theories in terms of buildings**. Clearly, the conceptual metaphor view must go beyond **circular reasoning** of this sort and seek evidence that is independent of the linguistic evidence."
>
> (McGlone 2001, 95; emphasis added)

That is, Lakoff and Johnson infer the existence of metaphorical concepts from the use of metaphorical expressions, and they infer the use of metaphorical expressions from the existence of metaphorical concepts. It is important to emphasize right at the outset that Lakoff and Johnson's reasoning is much more difficult to reconstruct than Chomsky's and Bierwisch and Lang's. Namely, the former argue simultaneously into two opposing directions (cf. (25) and (39)), while they do not differentiate between these two lines of argumentation systematically.[43]

Let us begin with the first direction. From a **methodological** point of view, metaphorical expressions are primary, because the following is assumed:[44]

(24) The cognitive **theory** of metaphor infers properties of metaphorical concepts from properties of metaphorical expressions.

The problem of circularity is closely related to (24), because it concerns the methodological question of how to account for the inferential connection between linguistic expressions and concepts. Therefore, before turning to the role (1) and (2) play in the resolution of circularity, we have to discuss the chain of inferences which belong to the methodological line of reasoning summarized in (24).[45] As we will see, (27)–(31)

[43] Therefore, **the whole** of their reasoning is present **simultaneously** at every stage and it is hard to reconstruct it as a linear sequence of inferences. What the conclusion and what the premise is depends basically on the particular point at which one interrupts the reasoning and begins with the reconstruction.

[44] "Since metaphorical expressions in our language are tied to metaphorical concepts in a systematic way, **we can use metaphorical linguistic expressions to study the nature of metaphorical concepts** and to gain an understanding of the metaphorical structure of our activities." (Lakoff–Johnson 1980, 7; emphasis added)

[45] Please note that the inferences discussed in the present section are plausible and not deductively valid. That is, their conclusion is only credible to a certain extent and not true with certainty. For the precise structure of shaded *modus*

below increase the plausibility of (24), and with the help of (1) and (2) further conclusions can be drawn.

Lakoff and Johnson seem to accept the principle that "one can move freely and gradually from facts about language to facts about human cognition and further on to facts about human life generally [...]" (Harder 1999, 196). However, the structure of such a "move" is anything but clear:

> "The trouble with Lakoff/Johnson's position is this: All that Lakoff/Johnson's data show is that we employ certain *expressions* (rather than *concepts*) that can—but need not—be associated with the domain of WAR. **Demonstrating the presence of metaphorical *concepts* is impossible on the basis of purely *linguistic* evidence** (cf. Murphy 1996). **How is the jump from language to thought justified?** Lakoff/Johnson (1980: 5) **do not tackle this question**, merely repeating their principal claim again."
>
> (Haser 2005, 147; italics as in the original, bold emphasis added)

Our model of plausible reasoning outlined in section **3** suggests the following reconstruction of the inference Harder and Haser refer to:

(25) Premises:

(a) Linguistic expressions associated with arguments are metaphorical.

(b) ⟨Between linguistic expressions and concepts there is such a relationship that from properties of linguistic expressions one may infer properties of concepts.⟩

Conclusion:

(c) The concept ARGUMENT is metaphorically structured.

Our model explains Haser's (2005, 147) criticism by interpreting (25b) as an "invisible" premise (in the sense of Polya, see section **3.2**) whose particular content is not known.[46] This is especially interesting, because, as we know, plausible reasoning proceeds, among other things, in such a way that the partial basis contains alternative assumptions between which one can choose only by examining "the credibility", "the weight", "the strength" of each of them in the light of the particular informational state. In the present case, the alternatives one of which should specify (25b) may be for example the following.

---

tollens and shaded *modus ponens* see Tables 1 and 2 in section **3.5**. The reason for reconstructing the following inferences in a simplified form—i.e., for omitting the plausibility-indicators ("possible", "less credible", "more credible", "certain", etc.)—is that otherwise our analyses would be too complex and difficult to capture for the reader.

[46] Invisible premises are marked by "⟨" and "⟩".

(26) Alternative premises in the partial basis:

(a) Meanings and concepts are **the same** and "linguistic expression" is shorthand for "the meaning of a linguistic expression".

(b) Meanings are **part of** the conceptual system and "linguistic expression" is shorthand for "the meaning of a linguistic expression".

(c) Meanings and concepts are **analogous** and "linguistic expression" is shorthand for "the meaning of a linguistic expression".

(d) Meanings and concepts are **isomorphic** and "linguistic expression" is shorthand for "the meaning of a linguistic expression".

(e) Linguistic expressions are **indices of** concepts.

(f) etc.

Nevertheless, one may argue that both Haser's criticism and our reconstruction of Lakoff and Johnson's reasoning in (25) and (26) are incorrect, because in the cognitive theory of metaphor the inferential connection between the metaphoricity of linguistic expressions and that of concepts is defined clearly:

> "**If metaphors were merely linguistic expressions, we would expect different linguistic expressions to be different metaphors.** Thus, 'We've hit a dead-end street' would constitute one metaphor. 'We can't turn back now' would constitute another, entirely different metaphor. 'Their marriage is on the rocks' would involve still a different metaphor. And so on for dozens of examples. **Yet we don't seem to have dozens of different metaphors here.** We have **one** metaphor, in which love is conceptualized as a journey." (Lakoff 1993, 209)

The structure of this argument is that of shaded *modus tollens* (cf. **3.5**) which is a typical pattern of plausible inference:

(27) Premises:

(a) If metaphors were merely linguistic expressions, then different linguistic expressions would be different metaphors.

(b) It is not the case that different linguistic expressions are different metaphors.

Conclusion:

(c) Metaphors are not merely linguistic expressions.

Furthermore, the idea of systematicity also plays an important role:

> "The LOVE IS A JOURNEY metaphor and Reddy's Conduit Metaphor were the two examples that first convinced me that metaphor was not a figure of speech, but a mode of thought, defined by a **systematic** mapping from a

source to a target domain. What convinced me were the three characteristics of metaphor that I have just discussed:

1. The **systematicity** in the linguistic correspondences.
2. The use of metaphor to govern reasoning and behavior based on that reasoning.
3. The possibility for understanding novel extensions in terms of the conventional correspondences." (Lakoff 1993, 210; emphasis added)

This argumentation can be reconstructed the following way:[47]

(28) Premises:

(a) If metaphors in connection with love were merely linguistic expressions, then there would be no systematicity among them.

(b) There is systematicity among linguistic expressions in connection with love.

Conclusion:

(c) Metaphors in connection with love are not merely linguistic expressions.

Lakoff (1993) uses (28c) as a premise supplemented by an analogy between metaphorical expressions associated with love:[48]

(29) Premises:

(a) If metaphors in connection with love are not merely linguistic expressions and we systematically speak about love as if it were a journey when metaphorical expressions associated with love are used, then there is a systematic mapping from the conceptual domain JOURNEY to the conceptual domain LOVE when we speak about love.

(b) Metaphors in connection with love are not merely linguistic expressions and we systematically speak about love as if it were a journey when metaphorical expressions associated with love are used.

Conclusion:

(c) There is a systematic mapping from the conceptual domain JOURNEY to the conceptual domain LOVE when we speak about love.

Similarly to (29), Lakoff (*ibid.*) obtains (30) as well:[49]

[47] The structure of this argument is that of shaded *modus tollens*, too.

[48] The structure of this argument is that of shaded *modus ponens*.

[49] The structure of this argument is that of shaded *modus ponens*, too.

(30) Premises:

(a) If metaphors in connection with love are not merely linguistic expressions and we systematically use patterns of inference about journeys to reason about love when metaphorical expressions associated with love are used, then there is a systematic mapping from one conceptual domain to the other when we reason about love.

(b) Metaphors in connection with love are not merely linguistic expressions and we systematically use patterns of inference about journeys to reason about love when metaphorical expressions associated with love are used.

Conclusion:

(c) There is a systematic mapping from one conceptual domain to the other when we reason about love.

The next link in the chain is an analogical inference which contains "invisible" premises as well:

(31) Premises:

(a) There is a systematic mapping from the conceptual domain JOURNEY to the conceptual domain LOVE when we speak about love.

(b) There is a systematic mapping from one conceptual domain to the other when we reason about love.

(c) The connection between the two conceptual domains is in both cases always metaphorical, i.e., a unidirectional mapping between the source domain and the target domain.[50]

(d) ⟨The conceptual domain LOVE as well as the conceptual domain JOURNEY are the same when we talk and when we reason about love.⟩

(e) ⟨There is no difference between the principles governing how we speak about love and the principles governing how we reason about love.⟩

Conclusion:

(f) There is only one set of principles governing speaking and reasoning about love, i.e., the concept LOVE is metaphorically structured.[51]

[50] "[...] the metaphor can be understood as a mapping (in the mathematical sense) from a source domain (in this case, journeys) to a target domain (in this case, love)." (Lakoff *op.cit.*, 206)

[51] "As a linguist and a cognitive scientist, I ask two commonplace questions:
Is there a general principle governing how these linguistic expressions about journeys are used to characterize love?
Is there a general principle governing how our patterns of inference about journeys are used to reason about love when expressions such as these are used?
The answer to both is yes. Indeed, **there is a single general principle** that answers

Just as in the case of (25), here it is also the very information specifying the connection between the metaphorical structure of linguistic expressions and that of concepts that is missing from the "visible" part of the partial basis.

After having explicated the inferential chain leading from metaphorical expressions to metaphorical concepts, let us turn to the role (1) and (2) play in Lakoff and Johnson's reasoning. Chapters 1 and 2 of Lakoff–Johnson (1980) witness that (1) and (2) undoubtedly assume a key position in the argumentative strategies the authors apply. For example this means that, after having analyzed a number of linguistic expressions and found that they are metaphorical, they conclude that language is metaphorical (see Figure 11):

(32) Premises:

(a) The concept of LOVE is part of the conceptual system underlying language.[52]

(b) The concept of LOVE is metaphorically structured.[53]

Conclusion:

(c) The conceptual system underlying language is metaphorically structured.

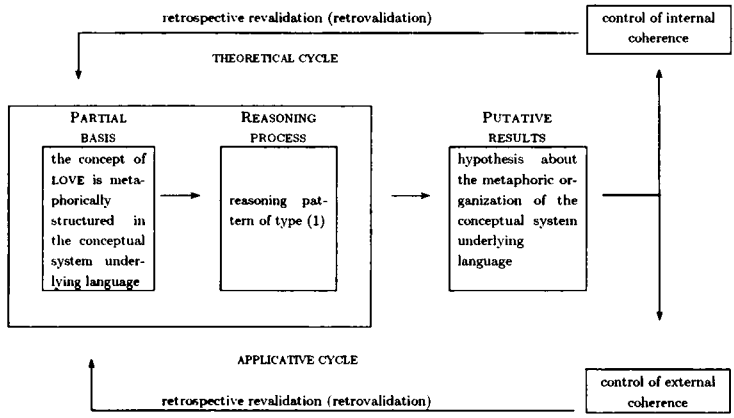

Fig. 11

both questions. But it is a general principle that is neither part of the grammar of English, nor the English lexicon. Rather, it is **part of the conceptual system underlying English**: It is a principle for understanding the domain of love in terms of the domain of journeys." (*Idem.*; emphasis added)

[52] Cf. "**The conceptual system underlying a language** contains thousands of conceptual metaphors—conventional mappings from one domain to another, such as the Event Structure Metaphor." (*Ibid.*, 239; emphasis added)

[53] Cf. (31a) and (c).

In analogy to (32), from (30c) they obtain (33) via (1) (see Figure 12):

(33) Premises:

(a) The concept of LOVE is part of the conceptual system underlying reasoning.

(b) The concept of LOVE is metaphorically structured.[54]

Conclusion:

(c) The conceptual system underlying reasoning is metaphorically structured.

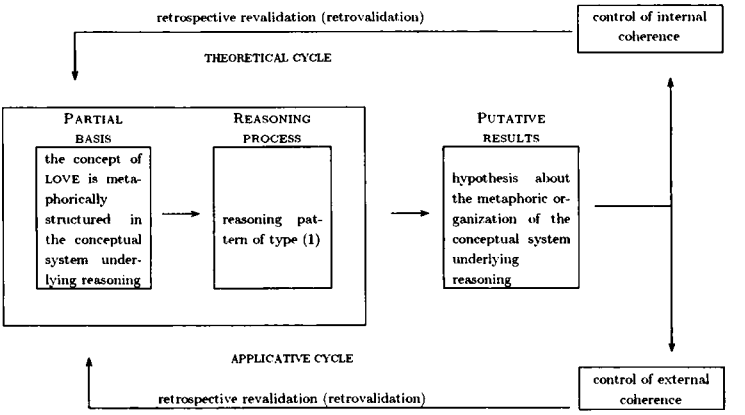

Fig. 12

Via (1) from (31d), (34) is obtained:

(34) Premises:

(a) The conceptual domain LOVE as well as the conceptual domain JOURNEY are the same when we talk and when we reason about love.

(b) The concepts LOVE and JOURNEY are part of the conceptual system underlying language and of the conceptual system underlying reasoning.

Conclusion:

(c) Thinking and language rest on the same conceptual system, i.e., there is only one conceptual system underlying language and reasoning.[55]

Similarly, (31e) can be extended to the whole of the conceptual system as well (Figure 13):

[54] Cf. (31b) and (c).

[55] Cf. "[...] communication **is based on the same conceptual system that we use in thinking and acting.**" (Lakoff – Johnson 1980, 4; emphasis added)

(35) Premises:

(a) The concept of LOVE is part of the conceptual system.

(b) The concept LOVE is metaphorically structured.

Conclusion:

(c) The conceptual system is metaphorically structured.

(35c) is one of the central hypotheses of Lakoff and Johnson's theory.[56]

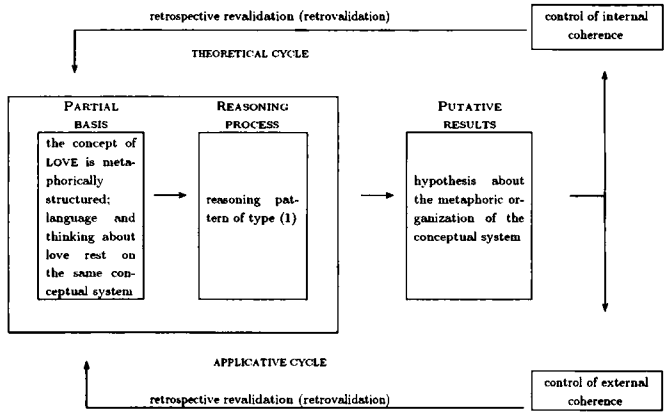

Fig. 13

However, Lakoff and Johnson also postulate the inverse relationship between metaphorical expressions and metaphorical concepts. Whereas metaphorical expressions are, as we have seen in (24), **methodologically** primary with respect to metaphorical concepts, from an **ontological** point of view they are secondary, because the following is assumed:

(36) Metaphorical expressions are the linguistic manifestations of metaphorical concepts.[57]

[56] "[...] the human conceptual system is metaphorically structured [...]." (*Ibid.*, 6)

[57] "Metaphors as linguistic expressions are possible precisely because there are metaphors in a person's conceptual system." (*Idem.*)

"Metaphor is fundamentally conceptual, not linguistic, in nature. Metaphorical language is a surface manifestation of conceptual metaphor." (Lakoff 1993, 244)

For example, the conceptual metaphor LOVE IS A JOURNEY is manifested in the metaphorical expressions *this relationship is foundering, we are going nowhere, this relationship is a dead-end street, we are at a crossroads*, etc.

Accordingly, the authors also argue in the opposite direction than (24) suggests, because they explain certain characteristics of metaphorical expressions on the basis of characteristics of metaphorical concepts. Therefore, for each inference of the methodological cycles there can be an inverse inference in one of the ontological cycles. For example, by the use of (2), the following inferences are carried out:

(37) Premises:

(a) Abstract concepts are part of our conceptual system.

(b) Our conceptual system is metaphorically structured.

Conclusion:

(c) Abstract concepts are metaphorically structured.

(38) Premises:

(a) Our conceptual system is metaphorically structured.

(b) The concept ARGUMENT is part of our conceptual system.

Conclusion:

(c) The concept ARGUMENT is metaphorically structured.

(39) Premises:

(a) Our conceptual system is metaphorically structured.

(b) ⟨Between linguistic expressions and concepts there is such a relationship that from properties of concepts one may infer properties of linguistic expressions.⟩

Conclusion:

(c) Linguistic expressions are metaphorically structured.

In the case of (39b) obviously the same problem of the invisible part of the partial basis arises as with (25), therefore the alternatives in (26) apply here, too. Thus we obtain the situation represented in Figure 14.

At this point we may risk the following conclusions:

Firstly, although the "jump" (Haser 2005) from linguistic expressions to concepts seems to be unmotivated and circular at first sight, this circularity can be avoided. The reason is that by inferring the existence of metaphorical concepts from the use of metaphorical expressions and the use of metaphorical expressions from the existence of metaphorical concepts, "one indeed returns to 'the same point' but does so at a different cognitive level" (Rescher 1987, 119). In particular, the difference

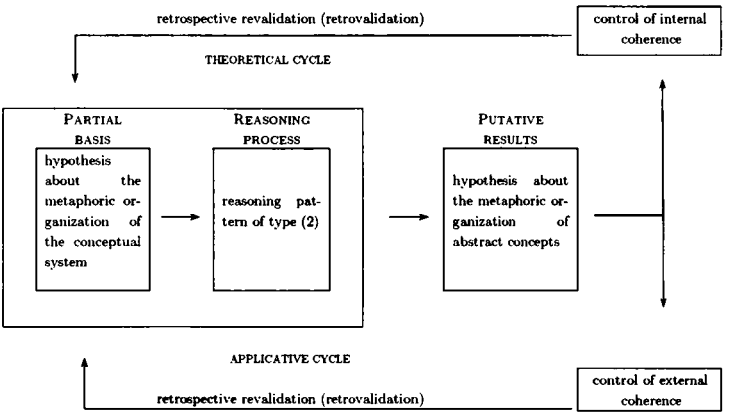

Fig. 14

between the two "cognitive levels" is that whereas one is methodological, the other is ontological. This finding **resolves the circularity**: the "jump" is nothing but a process of cyclic and prismatic revalidation that makes extensive use of (1) and (2). Therefore, from this point of view, the latter are effective, rather than ineffective: the gap between the metaphorical structure of linguistic expressions and the metaphorical structure of concepts can be filled only by the continuous retrospective revision of the basis, looking for the missing information in the hope that its invisible parts will eventually become visible.

Secondly, in Lakoff and Johnson's approach (1) and (2) contribute to turning the potential circularity of the argumentation into cyclic and prismatic reasoning.[58] Therefore, in this respect they are to be evaluated as effective.

Thirdly, what Lakoff and Johnson failed to do is the plausibility analysis of the alternatives which should be expected to specify the "invisible premises" in (25), (31) and (39).

Fourthly, in a series of cases even the plausibility of the "visible" premises can be seriously questioned. For example, several of the claims which Lakoff and Johnson use as premises clearly overgeneralize (see e.g., (28b), (30b)).

[58] However, this must not mean that other parts of Lakoff and Johnson's theory are not harmfully circular. For example, among the many passages whose circularity Haser (2005) reveals there may be several which are clear cases not of cyclical reasoning, but of *petitio principii*. See also Kertész–Rákosi (2005a).

In sum, although we tried to show the effective use of (1) and (2) in Lakoff and Johnson's reasoning, the question has to be left open whether the particular handling of the partial basis in a series of other inferences remains within the realm of plausible reasoning or transgresses the boundary which divides the latter from fallacies.

4.5. Summary

In section **4** we tried to show that in the case of all three theories the use of the patterns (1) and (2) plays an important heuristic role. That is, we have obtained the following solution to (P3):

(H3) (a) By the use of (1) and (2) the fallacy of *petitio principii* can be avoided in the given contexts in the three theories.

(b) Therefore, the use of (1) and (2) is effective.

(c) Therefore, they work as plausible rather than as fallacious inferences.

5. The solution to (D)

In sections **2**–**4** we supported the auxiliary hypotheses (H1)–(H3). These, in turn, yield immediately (H) which is our solution to (P). (H) suggests the following further considerations:

(i) On the one hand, our analyses imply that with respect to the structure of inferences we analyzed, a holistic cognitive semantic theory which explicitly rejects both generativism and modular cognitive linguistics is in reality **not as different** from the latter as is commonly assumed, because it uses the same patterns of inference (1) and (2).

(ii) On the other hand, generative linguistics and modular cognitive linguistic theories compatible with the latter behave in a way **radically different** from the way they claim to operate in, because the inferences they use to support their central hypotheses are far from the standards of the "received view" of the analytical philosophy of science. In particular, in opposition to (RVb), it is plausible rather than demonstrative inferences that these theories rest on.

(iii) We have seen that the standards of **rationality** which these theories do make use of are essentially different from what (RVa) requires.

(iv) We have also seen that (RVc) is untenable in the case of the investigated linguistic theories. It is **not** possible to distinguish sharply

between "the context of discovery" and "the context of justification", because every stage of theory formation is substantially determined by the use of plausible reasoning.

(v) Moreover, our considerations also witness that the heuristic strategies applied in generative, modular cognitive and holistic cognitive linguistics may make use of patterns of inference which are **borderline cases between plausible reasoning and fallacious inferences**. One cannot exclude at the outset that (1) and/or (2) seem to be plausible within one particular cycle of reasoning, while they turn out to be fallacious in the context of another cycle, or vice versa. This is a serious difficulty, because plausible and fallacious inferences differ substantially. In spite of their uncertainty, plausible inferences are fruitful, progressive and effective tools of scientific problem solving, while fallacies are destructive.

(vi) We chose very different examples to illustrate the wide applicability of (1) and (2). Thus the **problems** which the three theories try to solve with the help of (1) and/or (2) were very different in our analyses. In our example, Chomsky uses these patterns to establish the philosophical basis of his linguistic theory. Bierwisch and Lang infer their central empirical hypotheses via (1) and (2). Lakoff and Johnson make use of (1) and (2) in a large number of different theoretical contexts.

In the light of these findings there is no doubt that (H) motivates the complete and comprehensive revaluation of central aspects of theory formation in linguistics in general and cognitive linguistics in particular. However, the strength of this insight is substantially weakened by the fact that **we ourselves, too,** argued by starting from **a partial basis** with invisible premises, and drew **plausible inferences from this incomplete and uncertain informational base**. Our own argumentation itself suggests that in applying the technique of plausible reasoning one is well-advised to remember Walton's warning:

> "It is vitally important for the user of plausible argument to be open-minded, steering a mid-path between respecting the facts of a case and asking critical questions. The two main faults are the extremes of being dogmatic and leaping too quickly or too firmly to a questionable conclusion. Being dogmatic is a failure to be open to further dialogue. Leaping too quickly or too firmly may be a failure to seek more evidence, or even a closure to new evidence." (Walton 2001, 164f)

References

Bierwisch, Manfred 1987. Linguistik als kognitive Wissenschaft. Erläuterungen zu einem Forschungsprogramm. In: Zeitschrift für Germanistik 8 : 645–67.

Bierwisch, Manfred – Ewald Lang (eds) 1989. Dimensional adjectives: Grammatical structure and conceptual interpretation. Springer, Berlin & Heidelberg & New York.

Bremer, Manuel 2005. An introduction to paraconsistent logics. Lang, Frankfurt am Main.

Carr, Philip 2003. Innateness, internalism and input: Chomskyan rationalism and its problems. In: Language Sciences 25 : 615–35.

Chesñevar, Carlos Iván – Ana Gabriela Maguitman – Ronald Prescott Loui 2000. Logical models of argument. In: ACM Computing Surveys (CSUR) 32 : 337–83.

Chomsky, Noam 1976. Reflections on language. Fontana & Collins, Glasgow.

Chomsky, Noam 1979. Language and responsibility. Pantheon, New York.

Chomsky, Noam 2000. New horizons in the study of language and mind. Cambridge University Press, Cambridge.

Copi, Irving M. – Keith Burgess-Jackson 1996. Informal logic. Prentice Hall, New Jersey.

Eemeren, Frans H. van – Rob Grootendorst 1994. The fallacies of composition and division. Ms. (http://www.illc.uva.nl/j50/contribs/eemeren/)

Eemeren, Frans H. van – Rob Grootendorst 2004. A systematic theory of argumentation. The pragma-dialectical approach. Cambridge University Press, Cambridge.

Eemeren, Frans H. van – Rob Grootendorst – Francisca Snoeck Henkemans 1996. Fundamentals of argumentation theory. Lawrence Erlbaum, Mahwah NJ.

Fanselow, Gisbert – Sascha W. Felix 1987. Sprachtheorie. (Vols. 1–2). Francke, Tübingen.

Fodor, Jerry A. 1983. The modularity of mind. An essay on faculty psychology. MIT Press, Cambridge MA.

Forrai, Gábor 1987. The role of a metaphor in the birth of generative grammar. In: Doxa 9 : 49–55.

Gentner, Deidre – Arthur B. Markman 1997. Structure mapping in analogy and similarity. In: American Psychologist 52 : 45–56.

Hamblin, Charles L. 1970. Fallacies. Methuen, London.

Hansen, Hans V. – Robert C. Pinto (eds) 1995. Fallacies. Classical and contemporary readings. Pennsylvania State Univiversity Press, University Park PA.

Harder, Peter 1999. Partial autonomy, ontology, and methodology in cognitive linguistics. In: Theodorus A. Janssen – Gisela Redeker (eds): Cognitive lingusitics: Foundations, scope, and methodology, 195–222. Mouton de Gruyter, Berlin & New York.

Haser, Verena 2005. Metaphor, metonymy, and experiantialist philosophy. Challenging cognitive semantics. Mouton de Gruyter, Berlin & New York.

Johnson, Ralph H. 1995. The blaze of her splendors: Suggestions about revitalizing fallacy theory. In: Hansen – Pinto (1995, 107–19).

Kertész, András 2004a. Cognitive semantics and scientific knowledge: Case studies in the cognitive science of science. Benjamins, Amsterdam & Philadelphia.

Kertész, András 2004b. Philosophie der Linguistik: Studien zur naturalisierten Wissenschaftstheorie. Narr, Tübingen.

Kertész, András – Csilla Rákosi 2005a. Circular vs. cyclic reasoning in cognitive theories of metaphor. In preparation.

Kertész, András – Csilla Rákosi 2005b. Inconsistency and plausible inferences in an analysis of German affricates. A case study in the philosophy of linguistics. In: Language Sciences. Forthcoming.

Kertész, András – Csilla Rákosi 2005c. Remarks on the cognitive base of pragmatic theories. In: Acta Linguistica Hungarica 52 : 5–40.

Kienpointner, Manfred 1992. Alltagslogik. Struktur und Funktion von Argumentationsmustern. Frommann-Holzboog, Stuttgart-Bad Canstatt.

Lakoff, George 1993. The contemporary theory of metaphor. In: Andrew Ortony (ed.): Metaphor and thought, 202–52. Cambridge University Press, Cambridge.

Lakoff, George – Mark Johnson 1980. Metaphors we live by. The University of Chicago Press, Chicago.

Lakoff, George – Mark Johnson 1999. Philosophy in the flesh. The embodied mind and its challenge to western thought. Basic Books, New York.

Lang, Ewald – Kai-Uwe Carstensen – Geoffrey Simmons 1991. Modelling spatial knowledge on a linguistic basis: Theory – prototype – integration. Springer, Berlin & Heidelberg & New York.

McGlone, Matthew S. 2001. Concepts as metaphors. In: Sam Glucksberg (ed.): Understanding figurative language: From metaphors to idioms, 90–107. Oxford University Press, Oxford.

Meheus, Joke (ed.) 2002. Inconsistency in science. Kluwer, Dordrecht.

Mittelstraß, Jürgen 2004. Vorwort. In: Jürgen Mittelstraß (ed.): Enzyklopädie Philosophie und Wissenschaftstheorie. Vol. 1, 5–10. Metzler, Stuttgart.

Murphy, Gregory L. 1996. On metaphoric representation. In: Cognition 60 : 173–204.

Müller, Ralph-Axel 1991. Der (un)teilbare Geist. Modularismus und Holismus in der Kognitionsforschung. Mouton de Gruyter, Berlin & New York.

Nickles, Thomas 1980. Scientific discovery and the future of philosophy of science. In: Thomas Nickles (ed.): Scientific discovery, logic and rationality, 1–59. Reidel, Dordrecht.

Nickles, Thomas 2001. Discovery. In: W.H. Newton-Smith (ed.): A companion to the philosophy of science, 85–97. Blackwell, Malden MA & Oxford.

Politzer, Guy – Gaëtan Bourmaud 2002. Deductive reasoning from uncertain conditionals. In: British Journal of Psychology 93 : 345–81.

Polya, George 1948. How to solve it. Princeton University Press, Princeton NJ.

Polya, George 1954. Patterns of plausible inference. Oxford University Press, Oxford.

Polya, George 1981. Mathematical discovery. John Wiley & Sons, New York.

Putnam, Hilary 1962. What theories are not. In: Ernest Nagel – Patrick Suppes – Alfred Tarski (eds): Logic, methodology and philosophy of science, 240–52. Stanford University Press, Stanford CA.

Rákosi, Csilla 2005. Nyelvészeti elméletek argumentációs szerkezetének elemzése [The analysis of the argumentation structure of linguistic theories]. Doctoral dissertation, University of Debrecen.

Rescher, Nicholas 1976. Plausible reasoning. Van Gorcum, Assen & Amsterdam.

Rescher, Nicholas 1977. Methodological pragmatism. Blackwell, Cambridge MA & Oxford.

Rescher, Nicholas 1979. Cognitive systematization. Blackwell, Cambridge MA & Oxford.

Rescher, Nicholas 1987. How serious a fallacy is inconsistency? In: Argumentation 1: 303–316.

Rescher, Nicholas – Robert Brandom 1979. The logic of inconsistency. Blackwell, Cambridge MA & Oxford.

Ringen, Jon D. 1975. Linguistic facts. A study of the empirical scientific status of transformational generative grammars. In: David Cohen – Jessica R. Wirth (eds): Testing linguistic hypotheses, 1–41. Hemisphere, Washington D.C.

Ruzsa, Imre 2000. Bevezetés a modern logikába [An introduction to modern logic]. Osiris Kiadó, Budapest.

Suppe, Federick 1977. The search for philosophic understanding of scientific theories. In: Frederick Suppe (ed.): The structure of scientific theories, 3–243. University of Urbana Press, Urbana IL.

Walton, Douglas N. 1991. Begging the question: Circular reasoning as a tactic of argumentation. Greenwood Press, New York & Westport & London.

Walton, Douglas N. 1992a. Plausible argument in everyday conversation. State University of New York Press, Albany.

Walton, Douglas N. 1992b. Rules for plausible reasoning. In: Informal Logic 1992/1 33–51.

Walton, Douglas N. 1996. Fallacies arising from ambiguity. Kluwer, Amsterdam.

Walton, Douglas N. 1997. Informal fallacies. In: Jonathan Dancy – Ernest Sosa (eds): A companion to epistemology, 212–6. Blackwell, Malden MA & Oxford.

Walton, Douglas N. 2001. Abductive, presumptive and plausible arguments. In: Informal Logic 21: 141–169.

Woods, John – Andrew Irvine – Douglas N. Walton 2000. Argument: Critical thinking, logic and the fallacies. Pearson, Toronto.

Woods, John – Douglas N. Walton 1989. Fallacies. Foris, Dordrecht.

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ON INTUITIONS ABOUT PROPER NAMES*

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Abstract

Machery et al. (2004) carried out an experiment which tests the intuition of US and Chinese students about the use of proper names. They arrived at the conclusion that the way most respondents used proper names is not compatible with the causal-historical theory of proper names as advocated by Kripke. The author argues that Machery et al. are wrong in their conclusions. The problem is not just that the interpretation of the findings of their experiments does not take into account some variables that should have been considered, but rather that the experiment is faulty in several respects: their empirical hypothesis is arguably inconsistent, and the setup of the experiment is flawed.

Introduction

Machery et al. (2004) report an experiment to test certain semantic intuitions that are employed by philosophers of language to decide between two (at least prima facie) incompatible theories of the semantics of proper names. Among philosophers, it is widely accepted that these intuitions clearly argue against the so-called descriptivist theory of names and in favor of what Machery et al. call the causal-historical theory of names.

Although Machery and his co-authors do not explain this at length, it is clear that one aim of this experiment is to contribute to the case for a relativist view of human cognition: Those philosophers who assume the causal-historical theory of names to be more adequate than the descriptivist position base their opinion on intuitions that seem rather clear and

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unquestionable to themselves. However, according to Machery and his co-authors, a problem arises because such philosophers (like Kripke) do not only claim that the causal-historical theory captures their own way of using proper names, but assume this claim to be universally valid, not just for all speakers of English, but for all humans in general.

However, one could assume that Kripke is wrong to extend the validity of his claim in this way: his relevant intuitions might not agree with the intuitions of other Westerners who are native speakers of English, and there could be even greater disparities with regard to the intuitions of representatives of other cultures. Machery et al. set out to demonstrate that this is actually the case and not just a theoretical possibility. They conduct an experiment in which a statistically significant difference is found between answers (which are assumed to reflect relevant semantic intuitions) of US and Chinese university students. This difference is supposed to show that although some subjects in both groups report intuitions which accord with the descriptivist theory of names, Chinese students even more often report such intuitions. And thus the assumed universal validity of the causal-historical theory is disproved.

I will argue that the authors are wrong in their conclusions. The problem is not just that the interpretation of the findings of their experiments does not take into account some variables that should have been considered, but rather that the experiment is faulty in several respects: their empirical hypothesis is arguably inconsistent, and the setup of the experiment is flawed.

The structure of my paper is as follows: In section **1**, I will summarize the exact empirical hypothesis which Machery et al. examine in their experiment and present some details of the experiment itself which will be of relevance, as well as their findings. In section **2**, I point out three technical problems in the experiment setup. In section **3**, conceptual problems regarding the hypothesis underlying the experiment are discussed. In section **4**, I speculate on possible reasons for the statistically significant difference between the two groups, assuming that the authors' explanation is invalid. Finally, section **5** contains my conclusions.

1. Summary of Machery et al. (2004)

In philosophical circles, it is widely accepted (though not without exception) that the so-called causal-historical theory of names[1] captures the way people use proper names more adequately than the so-called descriptivist theory.

Essentially, the descriptivist theory (which is most prominently represented by Frege) claims that proper names like 'Aristotle' and 'London' are synonymous with definite descriptions like 'the teacher of Alexander the Great' and 'the capital of Great Britain', respectively.[2] This means that whenever we use the name 'Aristotle' (to refer to a specific person), we always have in mind the description that, for us individually, is synonymous with this name. This could be 'the teacher of Alexander the Great', 'the greatest philosopher of antiquity', a conjunction of these, or anything else, as long as it is fixed which description is synonymous with a given proper name for us. The reference of a proper name is determined by this description: whatever is denoted by the description will be the referent of the name.

The causal-historical theory, by contrast, claims that the relationship between the entity a proper name refers to and the name itself is direct, i.e., not mediated by a description. Names refer simply by virtue of an act of naming, where the reference of the name was fixed. All further uses of the name following the naming act are connected to the naming act by a historical chain: all those who know what the name 'London' refers to know this because they have heard this name being used to refer to a particular city and therefore established a connection between the name and the referent.

The reason why the causal-historical theory is regarded as more adequate and the descriptivist theory practically as refuted is that Kripke (1972/1980) presented some very convincing arguments which demon-

[1] I will stick to the terminology used by Machery et al. (2004). Two alternative designations frequently chosen instead of 'causal-historical theory of names' are the 'Millian' theory and the 'direct reference' theory. The more or less subtle connotative and denotative differences between these designations need not concern us here, since they should be irrelevant to the issue at hand. For two recent overviews discussing such differences, cf. Marti (2003) and Jackson (1998).

[2] This is, of course a gross simplification, but finer qualifications of the exact relationship between the description and the proper name or of the exact nature of the description, for example, would be irrelevant with respect to what Machery et al. (2004) try to achieve in their experiment.

strated that the latter theory does not work. Some of these arguments were thought experiments whose outcomes were consistent with the causal-historical but not with the descriptivist theory. As mentioned above, Machery et al. (2004) scrutinize this opinion by basically transforming Kripke's thought experiments into real experiments.

One of Kripke's thought experiments, cited as well as adapted by Machery et al., is the following:

> "Suppose that Gödel was not in fact the author of [Gödel's] theorem. A man called 'Schmidt' [...] actually did the work in question. His friend Gödel somehow got hold of the manuscript and it was thereafter attributed to Gödel. On the descriptivist view in question, then, when our ordinary man uses the name Gödel, he really means to refer to Schmidt, because Schmidt is the unique person satisfying the description 'the man who discovered the incompleteness of arithmetic'. [...] But it seems we are not."
>
> (Kripke 1972/1980, 83–4, as cited by Machery et al. 2004)

The same story, reformulated by Machery et al. and used in their experiment, reads as follows:

> "Suppose that John has learned in college that Gödel is the man who proved an important mathematical theorem, called the incompleteness of arithmetic. John is quite good at mathematics and he can give an accurate statement of the incompleteness theorem, which he attributes to Gödel as the discoverer. But this is the only thing that he has heard about Gödel. Now suppose that Gödel was not the author of this theorem. A man called 'Schmidt' whose body was found in Vienna under mysterious circumstances many years ago, actually did the work in question. His friend Gödel somehow got hold of the manuscript and claimed credit for the work, which was thereafter attributed to Gödel. Thus he has been known as the man who proved the incompleteness of arithmetic. Most people who have heard the name 'Gödel' are like John; the claim that Gödel discovered the incompleteness theorem is the only thing they have ever heard about Gödel. When John uses the name 'Gödel', is he talking about:
>
> (A) the person who really discovered the incompleteness of arithmetic?
>
> or
>
> (B) the person who got hold of the manuscript and claimed credit for the work?"

This text and three further ones (one of which is another version of the same Gödel story, and two are versions of Kripke's Jonah story) were presented to two groups of subjects: US and Hong Kong undergraduate students (the latter were all Chinese). For each text, they had to choose one of the two possible answers given. In the case of the text cited,

Machery et al. regarded answer (A) as a corroboration of the descriptivist view and answer (B) as one of the causal-historical view.

The empirical hypothesis that the authors wanted to verify by the experiment is the following: Nisbett and his co-workers claim (see e.g., Nisbett et al. 2001; Nisbett–Norenzayan 2002; Nisbett 2003) that there are significant cognitive differences between people living in different cultures; they concentrate on comparing East Asians and Westerners. One such difference is that whereas "East Asians are more inclined than Westerners to make categorical judgments on the basis of similarity, Westerners [...] are more disposed to focus on causation in describing the world and classifying things." According to Machery et al., we should therefore expect East Asians to choose the answer that corresponds to the descriptivist theory more often than Westerners, because of the following:

> "on a description theory, the referent has to satisfy the description, but it need not be causally related to the use of the term. In contrast, on Kripke's causal-historical theory, the referent need not satisfy the associated description. Rather, it need only figure in the causal history (and in the causal explanation of) the speaker's current use of the word." (Machery et al. 2004, B5)

The outcome of the experiment, as reported by Machery et al. (2004), seemed to confirm this hypothesis. There was a statistically significant difference between the two groups. On average, the Chinese participants chose an answer favoring the descriptivist view almost twice as often as the US participants. However, as the authors point out, the standard deviation even within these two groups was surprisingly high.

2. Technical problems

In this section, I would like to draw attention to three problems concerning the setup of the experiments conducted by Machery and his coworkers. They all involve the phrasing of the texts presented to the participants of the experiments, and the questions asked. I hope I will be able to argue convincingly that these problems are serious enough if considered individually, and jointly render the published results thoroughly invalid.

The problems are: 1. the appearance of the expression 'use the name' and 2. 'talk about' in the texts, and 3. the fact that only a choice between two ready-made answers is given to the participants. I will concentrate all of my remarks on the version of the Gödel text cited above. However,

they do in fact apply just as well to all the other texts that Machery et al. employed in their experiment.

2.1. Using a name

The notion of using a name in the sense as it is intended to be understood in the context of this text should be familiar to professional linguists and philosophers of language. However, it might be the case that the average person on the street does not quite know what is meant by this. The common use of the expression 'use a name' conveys something like 'to call yourself by a name that is not yours in order to keep your name secret' (this definition appears in the *Longman Dictionary of Contemporary English*), like in 'Grant had checked into a Miami hotel using a false name.' Another, somewhat different context where it appears would be something like 'She usually uses her maiden name.' The way this expression appears in the familiar contexts is obviously different from the way it is to be understood in the Gödel text above. When Kripke writes that someone 'uses the name Gödel', he is employing a quasi-technical term. The concept of using a name, for example, may or may not involve in such a context a contrast to just mentioning a name. These are philosophical issues the participants of the experiment will never even have heard about.

The way 'use the name' is to be understood in the text is not only unclear, but the way the utterance in question is described might be far too abstract to be of any use in an experiment like this.[3] What should

[3] Kripke's original text does include a further complication that is not necessarily carried over to the experiment, since the authors do not mention Gödel's theorem. The expression 'Gödel's theorem' is for several speakers, including myself, a proper name itself. To see this, suppose we learned that Peano had already proven the incompleteness of arithmetic a decade before Gödel, but had published it in some obscure place, so it had been forgotten about. In such a case, the name 'Gödel's theorem' would lose some of its motivation, but it would not necessarily have to be changed to 'Peano's theorem' or whatever. So, for speakers whose lexicon contains this proper name, the appearance of 'Gödel' in 'Gödel's theorem' does not constitute a use of the name 'Gödel'. 'Gödel' is only part of this expression etymologically speaking, but not semantically speaking, because in the latter sense, 'Gödel's theorem' is, like any other proper name, not transparent. The problem with this is that when one's only information about Gödel is that he proved this theorem, a rather frequent "use" of the name 'Gödel' would likely be as part of the expression 'Gödel's theorem'. One has to read Kripke very carefully in order to be able to spot that this is a "use" of this name that has

appear in the text is a concrete situation where John is actually using the name.[4]

2.2. Talking about

The expression 'talking about' in the question at the end of the text poses a significantly greater problem. This expression is ambiguous in a way that is relevant to the question that is being examined by the authors. To see this, picture the following situation: There is a party at which Norah is a guest. There are two important people at the party in addition to her: Jonathan and Sebastian. Norah didn't know them before but was introduced to them at the party. However, Norah confuses their names: she thinks Jonathan is called Sebastian and Sebastian Jonathan. Later in the evening, Norah spots the person actually called Jonathan stealing her wallet from her handbag. She screams appropriately: "Sebastian is a thief. He has stolen my wallet." Now who is Norah talking about? Well, that depends on whose position you identify yourself with. If you consider Norah's position, she is talking about the man (i.e., trying to refer to the man) she saw stealing her wallet, who she thinks is called Sebastian. (This man is actually called Jonathan.) If you consider the position of all the others present who do get the names right, she is falsely accusing Sebastian of theft, who has actually been drinking beer peacefully in the company of their host all along.

It is plain to see that essentially the same consideration applies to the Gödel text cited above. Suppose John (the person in Machery et al.'s text) said (cf. **2.1.**), "Gödel must be a very bright person. I sure would like to meet him." or asked someone "How old was Gödel when he discovered the incompleteness of arithmetic?".

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to be excluded for his thought experiment to work. For the subjects of the experiment who know the expression 'Gödel's theorem' but are not aware of these philosophical problems, this issue could be a further source of confusion, even though this expression does not appear in the text explicitly.

[4] Several readers have indicated that they do not agree with my claim that the appearance of 'use a name' in this context constitutes a problem. I do not have any more convincing arguments for this than the above. But the really important point in my opinion is that it is much clearer to present an actual utterance where a name is being used (in the sense we would like 'use a name' to be understood). In this way, the problem simply does not arise, and since this does not cost anything, I think it would be just stubborn and pointless to insist on the original formulation.

If you identify yourself with **John's** position, he is stating or asking something about (i.e., means to refer to) the person who, as far as he knows, really did discover the incompleteness of arithmetic and was called Gödel. He could not even consider referring to any other relevant person (especially not Schmidt). So the position of John comes rather close to answer (A) to the question, although that is not quite right. I will come back to this in section **2.3.**

On the other hand, if you take the position of an **external omniscient observer** and do not care about what John does or does not know about Gödel, then he is talking about (i.e., mentioning the name of) Kurt Gödel the fraud. This comes rather close to answer (B), but that is not quite right in this case either. Again, this point will be discussed in section **2.3.**

There may, of course, be other notions connected to the expression 'talk about' as used in the relevant context for other speakers. Some may be simply the logical conjunction or alternation of the two (whether a speaker only has a more restricted or a "holistic" notion of 'talking about', respectively). Some may have a third notion I did not think about. For all we know about human cognition, some such notion may even be inconsistent.

Anyway, if you could make sense of the Norah situation above (which, I assume, is the case for most competent speakers of English), you must be aware, whether consciously or unconsciously, that these two notions of 'talking about' are available normally to any speaker of English.[5] This is true, of course, of the participants of the experiment as well, when they try to interpret the questions they are supposed to answer. The question is: How do they go about this? I can see only two possible answers:

1. Assuming there is such a thing as an absolute (i.e., context-insensitive) concept of prominence of word meanings,[6] the reader could choose the strategy of favoring an interpretation of the ambiguous question where the expression causing the ambiguity is interpreted in terms of its most prominent (i.e., first, basic, primary) meaning. Or the most prominent meaning may be the only one that comes to the reader's mind in such a situation.[7] The problem is that meaning prominence, even if we assume that it exists on an individual level, is not like word order or

[5] I gloss over some qualifications of this claim, e.g., you should have an innate human theory of mind (or some equivalent of this), you should not be autistic etc.

[6] For an exposition of this concept, cf. Csatár et al. (2002).

[7] Or at least the only one she is able to consciously consider, disregarding the possible unconscious activation and immediate deactivation of unneeded word

declension: although there is significant agreement between speakers as to what they qualify as more and less prominent, there is also a patent variation to be observed. Also, in some cases, speakers can consciously order word meanings according to prominence, whereas in other cases they cannot.[8] We do not know as yet why this should be so. In any event, if speakers decide on this basis how to interpret the question, the outcome might tell us something about which interpretation of 'talk about' is more prominent for those individual speakers, but nothing whatsoever about the theories of the semantics of proper names. But normally, our interpretation is of course not driven by meaning prominence, but rather by the following.

2. It is much more likely that readers try to make sense of an ambiguous utterance or a discourse that seems incoherent at first sight by guessing the intentions of the writer. Suppose that you as the reader have no idea what the person in charge of the experiment would like to learn, but assume that they have something particular in mind. You have at your disposal the two above-mentioned possible interpretations of 'talk about' which both make sense in the discourse. If you interpret the question in one way, answer (A) seems somewhat more appropriate; if you do it the other way, answer (B) seems better. If you take the conjunction of the two notions, neither is right. In case you take the logical alternation, both are. Trying to guess which answer you ought to give in such a situation is equivalent to throwing a dime.

To correct this problem, the question to be asked should be modified. You can either ask "Who is John thinking of?" or "Whose name does John mention/pronounce?", depending on what you would like to learn. Both should be much clearer than the original question.

2.3. Only two choices

As mentioned above, if you carefully consider the two possible answers to the question asked in the Gödel text, neither of them seems quite right.

For if you take the position of John and choose answer (A), you feel rather uneasy since this answer contains the word 'really', which is hard

meanings, which is widely assumed in the psycholinguistics literature on the basis of Swinney (1979) and later experiments.

[8] At least I do not have the slightest idea which of the two interpretations of 'talk about' I should judge as more prominent than the other out of context.

to interpret relative to a given context (in this case, John's thoughts). In other words, answer (A) would be a rather awkward way of expressing the idea that Gödel is 'the person who, according to the information John has access to, really discovered the incompleteness of arithmetic' (which would be the correct answer in my opinion). In philosophical terms, 'really' is an indexical that wants to refer to the actual world. To interpret it context-dependently, as suggested above, would be to create a case of Kaplan's monster.[9]

On the other hand, answer (B) is not perfect either, if you interpret 'talk about' from the point of view of the external omniscient observer. Here, one finds oneself at odds with the fact that one knows that John mistakenly attributes some property to the referent of the name Gödel. Furthermore, one should assume that if John knew exactly what the omniscient observer of the story knows about Gödel, he would have no reason to utter something like "Gödel must be a very bright person." or "How old was Gödel when he discovered the incompleteness of arithmetic?".

If one were to answer that when John says such things, he is talking about (in the sense of pronouncing the actual name of) the person who did not actually discover the theorem, but "got hold of the manuscript and claimed credit for the work", one would definitely not be lying (from the omniscient observer's perspective). However, the answer seems to be pragmatically inappropriate, since one would withhold relevant[10] information and thereby violate Grice's maxim of quantity; namely, the information that John does not actually know this. So the correct answer should be something along the lines of "the person who got hold of the manuscript and claimed credit for the work, although John does not know this."

If this is right, both possible answers provided by Machery et al. are more or less inappropriate. Even if I am wrong about my own suggested answers being the right ones, they seem to be surely appropriate

[9] Cf. Kaplan (1989).

[10] Why should this information be relevant? I think Blutner (1998)'s theory of lexical pragmatics or its reformulation in terms of bi-directional optimality theory in Blutner (2002) could help us formulate an acceptable explanation. 'Talk about' is ambiguous as described above, and the speaker knows this. If the speaker provides the information that John does not know about the information mentioned, the hearer will be considerably more likely to correctly infer that 'talk about' is to be understood in its 'pronounce the name of' sense than without this information. Although this is hard to quantify, the gain of being unequivocal will outweigh the cost associated with being more verbose.

to me, and obviously different from the ones the authors provide. Consequently the two alternatives are without doubt insufficient. At least a third alternative should be provided, namely, "(C) none of the above, but rather:".[11] It seems to me that this would even be much more in line with the ideology behind the experiment: after all, as a Westerner who conducts the experiment, how should one be able to tell how a person from another culture, who might think in a way markedly different from yourself, would answer a question like this?

2.4. Interim conclusions

From the three points made in the previous sections, it should have become clear that although the text for the experiment was exactly modeled on Kripke's Gödel thought experiment, for someone who does not know what Kripke tried to prove with this story, the text makes hardly any sense at all. The essential difference between Machery et al.'s experiment and Kripke's original story is that the former is presented to the reader completely out of context, whereas the latter appears as a paragraph in Naming and necessity. On top of this, the audiences of the two texts, so to speak, are completely different. Kripke (1972/1980) is supposed to be read by philosophers. The participants in the experiment were undergraduate students. One can assume (e.g., on the basis of personal experience) that some of these students would not have understood the point of the paragraph in question even if they had read the whole Naming and necessity, since they lacked the training, the conceptual foundations and possibly the appropriate mindset to comprehend the idea.

For these technical reasons, the outcome of the experiment is impossible to interpret.[12] However, I contend that the experiment was doomed to failure right from the start for conceptual reasons which I will present in section **3**. Before I get to this, let me present another story that could

[11] There is a further serious problem in connection with the two choices: Elementary experimental methodology would require the order of the (A) and (B) answers be mixed, since some participants of the experiment would be reluctant to choose (A) or (B) consistently all the time, even if they thought that was the right answer. Machery et al. apparently neglected to do this. I am grateful to Janina Radó for this observation.

[12] Carson Schütze (2004) discusses some interesting problems pertaining to experimental methodology in linguistics (syntax, semantics and morphology) which are somewhat similar to those mentioned above.

be used in an experiment, which avoids the problems pointed out above with respect to the Gödel story of Machery et al.:

> "Gerhard is a German person who sees the film 'Bram Stoker's Dracula' in the cinema. In Germany, if a film is shown that was directed by a very famous director, the director's name is often mentioned in the title of the film. Gerhard knows this and is therefore convinced that Bram Stoker was the director of this movie. He does not know anything else about Bram Stoker.
>
> But in fact, Bram Stoker was not the director. He was a British writer who wrote the novel about Dracula which the movie was based upon. He died in 1912. The film was actually directed by Francis Ford Coppola.
>
> After having seen the film, Gerhard says to his friend Doris, 'This was a great movie. Bram Stoker is a terrific director.'
>
> Question version 1: 'When he says this, who is Gerhard thinking of?
>
> (A) the person who wrote the novel
>
> (B) the person who directed the movie
>
> (C) none of the above, but rather:'
>
> Question version 2: 'When he says this, whose name does Gerhard pronounce?
>
> (A) the name of the person who wrote the novel
>
> (B) the name of the person who directed the movie
>
> (C) none of the above, but rather:'"

The difference compared to the original text should be clear. Be that as it may, the answer to either of these questions tells us nothing interesting about the semantics of proper names, as I will argue in the next section.

3. Conceptual problems

In this section, I would like to point out two conceptual problems in connection with the experiment. Both concern the empirical hypothesis that underlies the experiment, and are completely independent of each other. The first problem is what I think is an inconsistency between the empirical hypothesis on the one hand and the very empirical generalizations Machery et al. base this hypothesis upon on the other hand. The second problem is that Kripke's Gödel story, as it stands, arguably does not help us at all to empirically decide between the two competing theories of proper names.

3.1. Does the causal-historical view involve causation? Is the descriptivist view holistic?

I have cited above, in section 1, the reason why Machery et al. assume that Westerners should choose the answer that corresponds to the causal-historical theory. The most relevant part of the explanation is the following: "Westerners [...] are more disposed to focus on causation in describing the world and classifying things."

I think it is a rather dubious claim that there should be any causal reasoning involved in our actual use of proper names. At least it could be argued that the assumption of a causal relationship is only necessary as a meta-semantic assumption (i.e., for explanations of semantic facts), but not as part of the semantics of individual proper names, even if we assume that the causal-historical theory and particularly its direct reference claim is basically right. In other words, the statement that Gödel is called 'Gödel' **because** he got this name, however informative it may be, might only be needed when we try to explain how Gödel got to be called 'Gödel'. For us to be able to use this name to refer to Gödel, no notion of causation may be required at all, but a simple, primitive associative link between the mental representations of the name and the person may be sufficient.[13]

Whereas I assume Machery et al. could defend their position to include the concept of causation in their account of the semantics of proper names, it is extremely puzzling why another claim that also appears in Nisbett and his co-workers' psychological theory of cognitive relativism and seems to be highly relevant to the issue under discussion is simply ignored. As Machery et al. (2004) themselves cite, the most significant difference between East Asian and Western thinking seems to be that East Asian thinking is holistic, whereas Western thinking is analytic.

[13] Regarding the historical part of the causal-historical theory, Almog 1984 quite convincingly argues that the historical chain proposed by Kripke as part of the explanation definitely does not figure as a part of a proper name's semantics, but only of its meta-semantics in the above sense. Furthermore, the idea of a historical chain is not specific to proper names, and therefore this part of Kripke's theory is not particularly informative. To all intents and purposes, a historical chain plays exactly the same part in passing on the usage rules of other content words from one generation of speakers of a language to the next as it plays in the fixing of the reference of a proper name. The latter idea is, of course, not just a philosophical claim, but a fact of sociolinguistics and historical linguistics.

Western thinking involves "detachment of the object from its context, [and] a tendency to **focus on attributes of the object in order to assign it to categories** [...]" (Nisbett et al. 2001, 293; cited by Machery et al. 2004, B5; emphasis added). It is not clear to me whether the causal-historical theory enters into a holistic-analytic dichotomy with the descriptivist theory in this respect, but the emboldened part of this citation surely is a par excellence characterization of the descriptivist view. Now if we approach the issue from this direction, the descriptivist view should be the perfect way to capture the use of proper names in Western societies. And we could take this idea even further. Consider that Frege, one of the most prominent representatives of the descriptivist view, was one of the fathers of Western logicism. Surely, this should be taken as strong evidence that there is an intimate connection between Western thinking and descriptivism. Or should it?

I think, in view of this dilemma, it would be grossly irresponsible to continue to construct empirical hypotheses for experiments on the basis of these ideas, as long as Nisbett and his co-workers' generalizations are formulated in such a general and elusive way (witness the hedge "a tendency to" in the above citation). This is not to say that these generalizations are not interesting; but they do not seem to constitute an empirically testable theory in their current state.

To sum up the point of this section: Machery et al.'s empirical hypothesis is arguably inconsistent with the very same theory of cognition that it is based upon: Whereas it can be deduced from that theory that Western reasoning should favor a descriptivist account of proper names, they assume that it favors a causal-historical one.[14]

3.2. What does follow from the causal-historical theory?

A puzzling aspect of Machery et al.'s paper is that their attitude about the role the semantic intuitions play in the proper names debate is rather peculiar. It is as if they thought that the debate revolves around the correctness of the intuitions themselves. Of course, this would be absurd: the puzzle that should be solved by the debate is not which answers to

[14] It could of course be argued (bearing in mind the qualification above) that if anything, Nisbett et al.'s theory may allow us to formulate inconsistent empirical hypotheses regarding the semantics of proper names (i.e., Western thinking favors causal-historical and descriptivist theories at the same time). Obviously, this would not help to rescue the plausibility of Machery et al.'s empirical hypothesis.

which questions are right, but instead, what is a correct model of the mental representation of the semantics of proper names. We would like to learn something about the mental representation that enables us to use a proper name, and, on a metalinguistic level, construct a model that explains why we use a proper name in the way we do. The thought experiments are just a way of testing the adequacy of the models by probing their predictions.

However, some parts of Machery et al.'s paper certainly suggest an interpretation that they regard the role of intuitions in a different way than is usual, and, at least in the case of Kripke, obviously intended. Particularly, I cannot find any other reasonable explanation for the fact that they obviously regard the outcome of their experiment as the most natural thing on earth. For most philosophers of language, the fact that approximately half of the Western participants gave answers that corresponded with the causal-historical view, whereas the other half gave answers of the other kind would probably have rung the alarm bells that there is something wrong with the results. For it seems rather miraculous how a linguistic community could function if there were such huge differences even in as substantial issues as how to use a proper name to refer.[15] The only obvious interpretation of the results of the experiment that is not contrary to common sense seems to me to take the answers to be no more than largely appropriate reactions to strange questions, and not evidence of differences in the actual mental representations of the meanings of proper names in general (which is what such answers ought to be).[16] Incidentally, as I argued in section **2**, they would have been right to assume this with regard to the experiment reported.

[15] Of course, the claim that such differences would cause problems in a linguistic community is an essentially empirical claim itself, and could well be wrong. I do not really see a way how we could test its validity (save using thought experiments), but it seems to me very plausible.

[16] The authors' discussion about the role and reliability of semantic intuitions is similarly puzzling. They seem to have two philosophical views on intuitions in mind: One view would be interested in the intuitions themselves. And only the second view would be "a proto-scientific project modeled on the Chomskyan tradition in linguistics. Such a project would employ intuitions about reference to develop an empirically adequate account of the implicit theory that underlies ordinary uses of names." (Machery et al. 2004, B9). Of course, the second view is the way in which the thought experiments and the intuitions on them should be understood. In fact, I cannot imagine any other sensible way to construe these theories of proper names, and the authors unfortunately do not explain what the other alternative exactly is that they have in mind.

Nevertheless, the relevant question is if one can construct real experiments that can be employed as empirical evidence to argue for one or the other theory of proper names, or for or against the universality of such a semantic theory, for that matter. The answer is, of course, yes. However, Kripke's Gödel thought experiment is unfortunately not suited for this purpose. It could be argued that Kripke got the result of this thought experiment wrong. The ordinary man he mentions would, in fact, really mean to refer to the person who really formulated the theorem. This is much more apparent in the Bram Stoker story than in Kripke's: Gerhard obviously does not mean to refer to (i.e., "is thinking of") the real Bram Stoker, the writer, but to the director of the movie, whatever his name is. On the other hand, it takes no genius to spot that Gerhard "pronounces" (i.e., mentions) the name of the writer, and not the director. It is just a simple reading comprehension exercise. In particular, it does not have anything to do with either theory of names whatsoever. I do not have the room to discuss this here, but I elaborate on this proposition in Pethő (2004).

In fact, standard Fregean descriptivist theories, which Machery et al. have in mind, could be tested experimentally by constructing very simple scenarios that involve a change in the only known (or at least "defining") property of a certain individual.[17] For example, imagine a situation where Frank's boss is called Paul and the only thing that Frank's wife Catherine knows about Paul is that he is Frank's boss. One could ask participants in an experiment whether Frank's boss would still be called Paul if he moved on to some other position, and whether Frank's new boss would be called Paul as well. Or one could ask them to judge whether it would be reasonable for Catherine to keep referring to Frank's new boss as Paul or not referring to his old boss as Paul anymore. This would be after all essentially what we would expect to happen if a speaker identifies the meaning of a proper name with a description. Furthermore, if one takes for granted the conclusions of Machery et al.'s experiment, it should be fairly normal if Frank and Catherine disagreed about whether it is correct to call Frank's new boss Paul (since, according to these conclusions, there are lots of speakers in our society according to whom proper names work in the descriptivist way and equally lots who think it's the other way round).

[17] This does not hold for non-standard theories, like e.g., quotational theories of proper names or ones involving temporal relativization of the defining property. I discuss this point in Pethő (2004).

There is yet another minor conceptual issue worth noting that obviously escaped Machery et al.'s attention. Suppose the Chinese, the Bantu, the Hungarians or whoever gave answers in this latter experiment that pointed consistently toward the conclusion that members of this speech community were using their proper names according to the descriptivist theory of names. Suppose further that speakers of English and German gave answers of the inverse kind. Would it be a legitimate conclusion that proper names in those other languages functioned differently from proper names in English? Hardly. The only thing we could reasonably conclude is that the languages in question seemed to lack proper names in the sense English and German have them, but only had descriptions. If there were such a language, this would arguably be major news, but definitely not for the theory of proper names.

3.3. Interim conclusions

The aim of this section was to demonstrate that the experiment had no chance to achieve what it was supposed to, because the hypothesis it tried to verify was not consistent with the theory it should have produced evidence for. Furthermore, it was suggested that Kripke's Gödel thought experiment was not the ideal way to test the validity of the descriptivist versus the causal-historical theory of names. Instead, another possible test was outlined.

4. How to interpret the outcome of the experiment

Whatever problems there were with the experiment, a statistically significant difference was observed for the Gödel text between Western and East Asian participants: the East Asians tended to reply that John is talking about the person who really discovered the incompleteness of arithmetic.

Since the groups tested were not particularly large, it would be interesting if another control experiment could confirm these differences.[18] But assuming that this effect was not just due to a coincidence, I would

[18] László Nemes actually did carry out basically the same experiments that Machery et al. report. Two groups of college students participated in these experiments: nurses-in-training and physiotherapists-in-training, all Hungarians. Much to his surprise, he found that there were similarly significant differences between the replies of the nurses vs the physiotherapists as between the Western and East

like to make an educated guess as to what might have caused the difference.

If one accepts the characterization of East Asian vs. Western thinking by Nisbett which was apparently corroborated by Weinberg et al. (2001), the relevant difference in the results could possibly be attributed to a difference in the strategies of comprehending texts employed by East Asians and Westerners: since Westerners detach objects from their contexts, as mentioned above, this may lead them to see the Gödel story just as a simple comprehension task, in which they are to find in the text who the name mentioned really applies to, independent of context. This would be Gödel the fraud, i.e., answer (B). Westerners gave this answer about 55% of the time, which is slightly above chance.

On the other hand, East Asians characteristically seem to regard themselves as parts of a community. This could involve empathy and willingness to identify oneself with the position of community members, in contrast to the individualism of the Westerners. And it would definitely involve a blind acceptance of widely held beliefs as truths, as emphasized by Weinberg et al. (2001). Empathy would lead them to identify their position with that of John, which would compel them to accept answer (A) as more appropriate (since, as I argued, answer A is the better one from the perspective of John). In addition to this, as the text explicitly states, most other people are like John, i.e., would use the name in the same way as John, which would in effect make it the right way in the eye of a Chinese person. This could be a reason why the Chinese selected answer (A) about 68% of the time for the Gödel story.

There is, however, no significant difference in the case of the Jonah stories between East Asians and Westerners, and in both groups, answer (B) occurs more often (ca. 60% of the time). If one continues the above line of thought, one notices that on the one hand, in the Jonah stories the fact that the beliefs of the community would suggest answer (A) is made just as clear as in the case of the Gödel stories. On the other hand, there is no actual person (just an anonymous average German high school student) to identify oneself with in one story, whereas in the other text, although there is such a person, her appearances at the beginning and the end of the text seem to be less salient subjectively, since the story is much longer and more complicated. So the fact that the previous effect is not observable in the Jonah cases may be attributed to the fact that a person

Asian groups of Machery et al. Let us not examine in detail what this probably means. I would like to thank László Nemes for sharing the results with me.

the reader could identify herself with is missing or less salient. If we compare the results of the Jonah cases with the Gödel cases, this would also mean that the presence of a person who one could identify oneself with would play a significantly more important role in East Asians' choice of answers than the presence of a community opinion.

However, as I mentioned in section **3**, this is all just irresponsible speculation and should not be taken seriously.

5. Conclusions

The main aim of this paper was to point out how important considerations of experimental design turn out to be in connection with testing the universality claim of the causal-historical theory of names. I hope to have shown that a much more straightforward experimental task could have produced far more plausible results. Although Stich and colleagues' idea, that classic thought experiments should be subjected to empirical testing in order to ascertain that they do not reflect the views of only a tiny minority of scholars but in fact of humans in general, does seem reasonable at first sight, this experiment demonstrates the dangers of tearing individual thought experiments out of their context. Texts which may be fairly straightforward in their original context can turn out to be misunderstandable or even seemingly incoherent if this happens. Whether the results of an experiment confirm or contradict the accepted view(s) concerning a thought experiment, the uncertainty remains that they might arise from the misinterpretation or simply lack of understanding of the problem at hand, rather than reflect what the participants really think about the thought experiment (if it makes sense to say this at all; cf. Weatherson 2003 for a deeper investigation of the philosophical consequences of similar problems).

The last thing I wanted to achieve was to create the impression that empirical investigations of semantic intuitions were useless or uninteresting. I believe that exactly the opposite is the case, not just for epistemology (cf. Weinberg et al. 2001) and questions concerning the philosophy of language (as in Machery et al. 2004), but just as importantly in linguistic semantics (cf. Csatár et al. 2002 and Pafel 2001). However, the problems encountered by Machery et al. (2004) show that one has to be extremely careful when trying to adapt a philosophical thought experiment and transform it into a real experiment. It seems that taking an actual situation that may even be quite likely to occur, and asking

subjects about how they would behave in such a situation (or how they would expect others to behave) seems the best way to choose. The less abstract the situation is and the less linguistic behavior is involved the better. Another conclusion that seems to suggest itself is that one has to be extremely careful about the lexical semantic properties of words that appear in such an experiment. A lexical ambiguity, even if it is too fine to be explicitly mentioned in a dictionary, could ruin the results.[19] It seems that although the distance between linguistic semantics and the philosophy of language has continuously increased in the past 25 years (cf. Nunberg 2002), they may still have something interesting to say to each other, and face similar problems.

A final point is that the relative and absolute weight of factors such as social expectations needs to be carefully established if one has reason to believe that they affect the answers given (even if as extrinsic factors), as also pointed out e.g., by Weinberg et al. (2001).

References

Almog, Joseph 1984. Semantical anthropology. In: Midwest Studies in Philosophy 9: 479–89.

Blutner, Reinhard 1998. Lexical pragmatics. In: Journal of Semantics 15: 115–62.

Blutner, Reinhard 2002. Bidirektionale Optimalitätstheorie. In: Kognitionswissenschaft 9: 158–68.

Csatár, Péter – Orsolya Farkas – Gergely Pethő 2002. Semantische Intuitionen als linguistische Daten. Manuscript, University of Debrecen.

Jackson, Frank 1998. Reference and description revisited. In: Philosophical Perspectives 12: 201–18.

Kaplan, David 1989. Demonstratives: An essay on the semantics, logic, metaphysics, and epistemology of demonstratives and other indexicals. In: Joseph Almog –

[19] Weinberg et al. (2001), for example, do mention that the way the word 'know' is ambiguous in English may affect the results of their experiment concerning the universality of epistemological theories. However, what should also be considered in such experiments is the lexical properties of the appropriate words in the first language of the foreign participants of the experiments. For example, if the rules of usage of the verb *know* should turn out to be less restricted in the participants' mother tongue than in English (e.g., in Hungarian, one can say that someone knows something wrongly of a person who is firmly committed to the truth of a proposition, but that proposition is actually false), these patterns could and should indeed be expected to interfere with the interpretation of the English expression.

John Perry – Howard K. Wettstein (eds): Themes from Kaplan, 481–564. Oxford University Press, Oxford.

Kripke, Saul Aaron 1972/1980. Naming and necessity. Blackwell, Oxford.

Machery, Edouard – Ron Mallon – Shaun Nichols – Stephen P. Stich 2004. Semantics, cross-cultural style. In: Cognition 92 : B1–B12.

Marti, Genoveva 2003. The question of rigidity in new theories of reference. In: Noûs 37 : 161–79.

Nisbett, Richard E. 2003. The geography of thought: How Asians and Westerners think differently ... and why. Free Press, New York.

Nisbett, Richard E. – Ara Norenzayan 2002. Culture and cognition. In: Douglas L. Medin (ed.): Stevens' handbook of experimental psychology. Volume 2: Memory and cognitive processes (3rd ed.), 561–97. John Wiley and Sons, New York.

Nisbett, Richard E. – Kaiping Peng – Incheol Choi – Ara Norenzayan 2001. Culture and systems of thought: Holistic vs. analytic cognition. In: Psychological Review 108 : 291–310.

Nunberg, Geoffrey 2002. Do you know what it means to miss New Orleans? In: Linguistics and Philosophy 25 : 671–80.

Pafel, Jürgen 2001. SFB 441, Teilprojekt A4: Semantik und Intuition. Förderungsantrag. SFB 441, Tübingen.

Pethő, Gergely 2004. Is Kripke's Gödel thought experiment irrelevant and incoherent? Manuscript. Research Group for Theoretical Linguistics, HAS-UD, Debrecen.

Schütze, Carson 2004. Garbage in, garbage out: Thinking about what we're asking subjects to do. Talk presented at Linguistic Evidence: Empirical, Theoretical and Computational Perspectives, Tübingen, 29 January 2004.

Swinney, David A. 1979. Lexical access during sentence comprehension: (Re)consideration of context effects. In: Journal of Verbal Learning and Verbal Behavior 18 : 645–59.

Weatherson, Brian 2003. What good are counterexamples? In: Philosophical Studies 115 : 1–31.

Weinberg, Jonathan M. – Shaun Nichols – Stephen P. Stich 2001. Normativity and epistemic intuitions. In: Philosophical Topics 29 : 429–59.

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THE SEMANTIC CONTENT OF PARTIALLY DESCRIPTIVE NAMES*

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Abstract

According to contemporary Millianism the semantic content of an ordinary proper name is simply its referent. In his recent book *Beyond rigidity* Scott Soames elaborated a new version of millianism. He claimed that some linguistically complex names such as *Professor Saul Kripke* or *Princeton University* have partially descriptive semantic content. In addition to their unique referents, these names are always associated with a special kind of description. I argue in this paper that Soames's theory of partially descriptive names fails, because descriptive contents can be found only in the background knowledge of competent speakers.

1. Introduction

Defenders of the traditional Millian doctrine often say that the semantic content of an ordinary proper name is simply its referent. According to this popular view a particular nonmetaphorical, nonironical utterance of a declarative sentence s with a proper name n expresses semantically the information that the speaker is primarily concerned to communicate about the referent of n. That is to say that in normal everyday contexts proper names contribute to the asserted communicative information exclusively with their referents. In addition, contemporary Millians claim that in such cases the asserted information content of a declarative sentence is a singular or "Russellian" proposition. The most distinctive feature of singular propositions is that they contain objects and persons and their properties as constituents. Accordingly, in (1), the expressed singular proposition contains both the person Kripke and the property of living in Princeton.

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(1) Saul Kripke lives in Princeton.

The somewhat metaphorical term "contains" means here that relative to the actual world the proposition is in fact **about** Kripke and the property of living in Princeton. In other words: the proposition attributes a real-world property to a real-world person.

It is of great theoretical importance that in singular propositions the individual constituents are directly represented, without mediation of any further qualities. So in (1) the name *Saul Kripke* contributes to the expressed proposition only with the person to whom it in fact refers. In this specified sense of semantic content proper names pick out their real-world referents directly and never contain additional qualitative or descriptive informations.

According to a slightly reformulated Millian view, defended recently by Soames (2002) and mentioned in agreement with him by Sullivan (2003), there are however interesting exceptional cases to this rule. Soames (2002) offers a detailed argument to show that certain Millian names have a twofold semantic structure. Although linguistically simple proper names typically do not contain any descriptive information, some complex names such as the phrases *Princeton University* or *Professor Saul Kripke* are regularly associated with descriptive properties that apply only contingently to their bearers. Soames introduced the notion **partially descriptive names** to deal with these complex phrases.

The semantic structure of partially descriptive proper names consists of two separable parts. On the one hand, as ordinary Millian names all such names have in the actual world a unique referent. On the other hand, they are associated with contingent descriptive information. The semantic content of a partially descriptive name includes therefore both a nondescriptive and a descriptive component. The nondescriptive component—the referent of the partially descriptive name n—is the historically or causally determined object o. This means that the object o, which stands at the beginning of a historical or causal chain of transmission of the name n, is initially determined by an ostensive baptism or by a descriptional stipulative naming. The descriptive component—the contingent property P_c attached to the object o—is specified in every particular case by the referential intentions of speakers, who utter declarative sentences with the name n. On Soames's view these two components play a parallel and complementary role in fixing the reference of the partially descriptive name n. It is supposed furthermore that the

descriptive component is of substantial semantic importance, because it has a reference-fixing role in a long-term sense. Once the referent has been fixed, every competent speaker in the future who utters declarative sentences in normal circumstances with the name n, will attach the contingent property P_c to o. Thus P_c remains permanently associated with the name as a timeless descriptive reference-fixing definition.

It is clear at first sight that Soames's train of thought results in a hybrid theory, which aims to reconcile essential antidescriptivist and descriptivist insights concerning the semantics of proper names. This procedure is an ambitious research program in itself, surely, but I do not think that Soames's theory in its present form succeeds. In the following brief comment, I will give an argument that purports to show the main flaw in his reasoning.

2. Competence conditions for partially descriptive names

Let us first consider what governs our everyday linguistic behavior when we utter simple declarative sentences with ordinary proper names. Because of the great variety of communicative situations where proper names usually occur, and because of the possible diversity of speaker intentions in these situations, the question of the governing principles of everyday usage seems to be extremely complicated, but, fortunately, we can concentrate here on two salient and theoretically significant features of our linguistic practice.

The first obvious thing to say about everyday usage is that if speakers are to speak about an object or person, they must have a discriminating cognitive fix on the thing or person. It is tempting to explain this obvious fact by holding that from the point of view of speakers, the cognitive mechanism of discriminative fixing functions as a background condition of successful communication. Maybe, this discriminative ability can be seen as the necessary cognitive precondition for using words with referential power even in general. If so, then in the case of ordinary proper names this means that to use such names as *Princeton* or *Saul Kripke* successfully, speakers must have the corresponding cognitive intentions to discriminate the city and the person to which these names respectively refer.

Beyond discriminative intentions speakers must also have some reflective linguistic capacity to count as competent with the public information content of proper names. The need for this second cognitive condition seems to be equally obvious for the simple reason that in declarative sen-

tences ordinary proper names stand in general in subject position. There are, of course, relatively often used sentence forms where names occupy other syntactical places. Sometimes personal names may seem to occur predicatively, as, for example, in the sentence *This smart guy is Saul Kripke*. Names may appear naturally in an isolated position, too. In answering customary interrogative sentences, such as *Who is this smart guy?*, speakers could use personal names as syntactically unstructured one-word replies. But apart from these clear exceptional cases, in the vast majority of situations where a speaker uses the name n in simple declarative sentences to refer to the object o, she uses n in subject position to indicate which thing she is trying to convey information about. There is a schematic empty sentence form n *is* F, which must be filled in every case with a name and a property for the concrete utterance to say something definite. It follows from this that it must be known to speakers at least implicitly what it takes in normal contexts to assertively utter sentence tokens which contain proper names in their subject positions. That is, to be able to say of the referent (the object o) of n that it has the property F-hood speakers must be equipped with some reflective syntactic knowledge. Consider sentence (1) again:

(1) Saul Kripke lives in Princeton.

(1) expresses the singular proposition that predicates the property of living in Princeton of Kripke. Therefore, speakers must reflectively understand that in all normal contexts by assertive utterances of (1) they are attributing to the referent of *Saul Kripke* the property of living in Princeton.

With similar considerations in mind, Soames mentions the following two competence conditions for ordinary proper names.[1]

C1. Speakers must possess referential intentions that determine o as the referent of n in normal conversational situations. This communicative intention may arise either from a direct epistemic source (introducing an expression to name the object o, on the ground of personal acquaintance with o) or from an indirect linguistic source (intending to refer to the object o by way of linguistic reference).[2]

[1] See Soames (2002, 65).

[2] In what follows I will ignore the difference between epistemic and linguistic sources of referential intentions.

C2. With respect to a given context, speakers must realise that with assertive utterances in the form *n is F* they say about the referent of *n* (about the object *o*) that it is *F*.

In my opinion, there is something deeply and indisputably right in the formulation of these two conditions. **C1** mirrors the intuitively right point of the externalist theories of intentionality that successful *de re* linguistic reference with singular terms requires always individuating mental intentions. **C2** invokes the plausible epistemic idea that (implicit) reflective knowledge about the functioning of the sentence scheme *n is F* counts as a prerequisite for assertively uttering sentences in a given context with ordinary proper names. Reading **C1** and **C2** together as an integral whole, we can see what traditional Millianism says at a fundamental level about competence conditions concerning proper names.

What complicates matters a little bit, however, is the fact that in contrast with ordinary proper names partially descriptive names are syntactically structured linguistic entities. If we are prepared to agree with Soames's original hybrid theory, then we must suppose that these names have also certain competence conditions. Now what would be involved in the competence conditions of partially descriptive names? Soames seems to forget to discuss this important question.[3] Before I try to fill this gap, consider the following short list of examples:

Grammatical Types of Partially Descriptive Names

(A) *Princeton University, Yankee Stadium.*
(B) *Whidbey Island, Snoqualmie Falls.*
(C) *Professor Saul Kripke, Princess Diana.*
(D) *Miss Ruth Barcan, Mr. Terry Thomas.*[4]

Here, in each case a proper name occurs as part of a noun phrase. In (A) and (B) we see ordinary proper names which are followed by common nouns. In (C) the phrases are structured of course in reverse order.[5] Beyond this superficial syntactic remark, the decisive question is, I think, how these different phrasal constituents interact semantically. The an-

[3] This is a striking deficiency of his book, because he analyses the behavior of descriptive names in three different chapters.

[4] All examples stem from Soames (2002).

[5] For ease of discussion I abstract here from the somewhat problematic type (D).

swer seems to be perfectly straightforward: the interaction of ordinary proper names and common nouns in noun phrases yields semantic mixtures or semantic amalgams. If partially descriptive names are really genuine proper names, then they contribute to the propositional content of declarative sentences only with their referents. Thus, they are rigid designators in the classical Kripkean sense. In possible worlds similar enough to our actual world the phrase *Professor Saul Kripke*, for example, always refers to the same person, if it designates anything at all, since the name *Saul Kripke* is rigid. But, as Soames suggests, partially descriptive names behave, strictly speaking, not rigidly, because the kind of content they semantically express includes also contingent properties of their referents.[6] That is, in the phrase *Professor Saul Kripke* the common noun *professor* is a nonrigid property designator. So there are such counteractual worlds in the modal space where the very person who in our actual world is a professor and bears the name *Saul Kripke*, has another profession, and for that very reason the whole phrase cannot be classified without further ado as rigid. This modal anomaly arises from the plain semantic fact that beyond its referent the name contains as additional semantic information the contingent property of professorhood. And the observation generalizes smoothly to the grammatical types from (A) to (D): there is a built in information mixture to the semantic profile of the enumerated names consisting in all cases of (i) the rigidly designated particular objects, and (ii) the appropriate contingent properties attached nonrigidly to the designated particular objects. To illustrate the hidden informational structure of these names, Soames gives the following general formula: *the* x: Dx & $x = y$, where the definite description D represents the contingent property attached to the referent of the name, relative to an assignment of the variable y. According to this formula, the structure of the name *Professor Saul Kripke* must be analysed in the following way: *the* x: x *is a professor* & $x = y$, under an assignment of Saul Kripke to the variable y.[7]

[6] See Soames (2002, 120).

[7] Soames (*op.cit.*, 110) says in fact that that the semantic contents of partially descriptive names are roughly the same as the semantic contents of certain definite descriptions. It is not entirely clear for me what the adverb *roughly* means in this context. If partially descriptive names are synonymous with definite descriptions, the synonymy relation between them must hold unambiguously.

If partially descriptive names are structured really this way, it follows that the previously mentioned two competence conditions **C1** and **C2** must be complemented by **C3**, or by something analogous with it.

C3. In using a partially descriptive name n to refer to an object o in normal conversational situations speakers must permanently associate the **contingent descriptive property** P_c with the object o.

At this point, we should accept the thesis, for the sake of argument at least, that in our actual world under normal circumstances an average speaker could have cognitive access to the whole semantic content of a partially descriptive name. Then the main question is whether these three conditions **C1, C2** and **C3** jointly show what speakers in our actual world must know in general to understand and use such names competently. I am sceptical concerning this question, because the condition about associated properties poses in my view an insurmountable problem for Soames's theory. What I would like to do in the remainder of the paper is to demonstrate why such a condition as **C3** cannot be met.

3. Where does descriptive information come from?

While ordinary proper names represent only their referents, a partially descriptive name, according to Soames, gets into the process of a particular conversation with a referent and an associated descriptive property. Consider what he would say about the following sentence pair, uttered alternatively in a situation where prior to the time of the concrete utterance both the speaker and the hearer were competent users of the linguistically simple names *Saul Kripke* and *Princeton* (i.e., they satisfy in advance the requirements of **C1** and **C2**):

(1) Saul Kripke lives in Princeton.

(2) Professor Saul Kripke lives in Princeton.

As for the first sentence, Soames might insist that uttering these words with declarative intentions a speaker conveys no more content semantically than the information that the well-known philosopher of language Saul Kripke lives in Princeton. This seems to be intuitively very plausible because the sentence contains no overtly indexical expressions or other

context-sensitive grammatical elements with varying referents from context to context and the contextual value of the present tense of the verb counts in normal conversational settings as unambiguous, and because we supposed further that the speaker knew that the hearer has both names in her mental lexicon.[8]

It is quite another matter that in special cases an utterance of (1) could convey possibly more information than just the lean and seemingly trivial proposition that Saul Kripke lives in Princeton. Agents who know various significant things about the life story and personality of Saul Kripke could perhaps know that he does not particularly like the city Princeton. They could know, perhaps from personal communication, that Kripke believes that Princeton is not pretty. In this hypothetical case, an utterance of (1) would imply the descriptive information content to the addressees that because he now lives there, Kripke probably changed his negative opinion about Princeton. This putative descriptive information would belong, however, to the inferential mechanisms employed in the interpretation of the sentence. According to Soames, who distinguishes sharply first-order semantic content from other types of asserted or implicated information, statements with ordinary proper names may carry occasionally some descriptive information which goes beyond the literal meaning of the uttered sentence token. No doubt, sometimes it is an extremely demanding interpretive exercise to determine precisely what this extra information content consists of. Soames acknowledges this, but it is important to see, he says, that this kind of information could be conveyed solely by second-order pragmatic means.[9]

The best candidate for being the semantic content encoded by assertive utterances of (1) is thus the mere information that Saul Kripke lives in Princeton. This is in agreement with other contemporary Millians like Salmon (1986) and Thau (2002) who would presumably maintain that in this sentence, under normal circumstances, the linguistically simple proper name *Saul Kripke* (and *Princeton*) lacks any descriptive content.

But what about our second sentence? As **C3** suggested above, to count as competent with the partially descriptive name *Professor Saul Kripke* speakers must permanently associate with the referent of the simple proper name *Saul Kripke* (i.e., with the person the name rigidly designates) the contingent property of professorhood. From this it follows

[8] For detailed arguments see Soames (2002, 63–5).

[9] Soames (*op.cit.*, 86). For a similar view, see Capellen – Lepore (2004).

that in our hypothetical situation, where both the speaker and the hearer are competent users of the simple name *Saul Kripke* (and *Princeton*)—via satisfying the conditions **C1** and **C2**—an assertive utterance of (2), in contrast to (1), would express the descriptively enriched semantic content that the well-known philosopher of language Saul Kripke, **the professor**, lives in Princeton. Thus, Soames would conclude that in this case the putative descriptive information is carried by the common noun *professor*.

4. Descriptive contents in mental files

It seems to me that the aforementioned Soamesian inference cannot be justified. The decisive reason for this is that the descriptive content of the property designator *professor* does not enter necessarily into the asserted content of (2). I think that being a competent user of the proper name *Saul Kripke* in the actual world at a time t amounts to knowing, among other things, that the designated person is a professor.[10]

On what grounds can one accept this claim? From a cognitive point of view, it can be argued that to count as competent with the name *Saul Kripke* a speaker must have a separate mental file about the person Kripke.[11] Let us call it **the Saul Kripke File**. Beyond some mental pictures, memory-traces of moods and other types of stored information, the Saul Kripke File will be filled very likely with a great amount of contingent semantic information. According to the cognitive hypothesis all contingent semantic content in the Saul Kripke File will be associated with the name *Saul Kripke*. For competent users, for example, the sound of the words *Saul Kripke* provides access to all semantic information stored at the moment about Kripke. In this way, speakers may associate with the name such descriptive contents as *he is smart*, *he has a beard*,

[10] Recall what condition **C1** says: competent users of a proper name must possess discriminating abilities, that is, they must gain enough knowledge from epistemic or linguistic sources to pick out the designated object determinately. It is easy to imagine contexts in which the deferential source of such a name as *Kripke* includes regularly a contingent but characteristic feature of the referent. In science classroom contexts, for example, the first encounter with the name may bring about in students a latent association between the person who is called *Kripke* and the contingent property of *professorhood*. Kroon would say that this property becomes "resiliently" associated with the name. See Kroon (2004, 282).

[11] About mental files see among others Recanati (1993), Geirsson (2001) and Segal (2001).

he is a professor, and so on (if they have placed these linguistic items previously into their mental files). That is, the associated descriptive contents help them cognitively track the individual named.

This does not mean, of course, that the name contains in its semantic profile these contingent pieces of information. But when competent speakers assertively utter sentences in a public language with the proper name *Saul Kripke*, they can lean on this previously acquired background knowledge. In successful cases, a coordinated mental file management takes place. Thus, the already known properties of the designated person become part of the common ground among the participants in the conversation. If that is right, then the contingent fact or information that Saul Kripke is a professor must not be explicitly **expressed** by normal utterances of (2). I conclude, therefore, that for competent hearers (2) expresses the same basic proposition semantically as (1), namely that Saul Kripke lives in Princeton. To take one more example, consider the following sentence pair (3) and (4).

(3) Peter Hempel was Carl Hempel.[12]

(4) Professor Peter Hempel was Professor Carl Hempel.

Here it is even clearer that there could not be a significant difference between the expressed semantic content of the two sentences. I agree entirely with Soames's claims about the possible utterance contents of (3). It is very likely that an average speaker could use (3) to communicate different things in different contextual settings. One could assert with (3) the contextually enriched identity statement, for example, that the man formerly known by the name *Peter Hempel* was in fact identical with the famous philosopher of science Carl Hempel. On another occasion the sentence might convey the metalinguistic proposition that there was only one famous philosopher named *Hempel*, and perhaps there are a few other real possibilities. According to Soames, however, (3) expresses semantically no more than the simple fact that the rigidly designated objects of the two proper names *Peter Hempel* and *Carl Hempel* are identical. And it is easy to see that the first-order content of this identity relation does not contain any descriptive information. So far so good.

One problem now arising, though, is that contrary to the explicit expectations of Soames's theory (4) seems to express semantically the

[12] For a detailed analysis of (3), see Soames (2002, 66).

very same content. If our hypothetical speaker has the required minimal background knowledge to be a competent user of (4)—that is, she has a suitable mental file about the person Hempel—she may know, among other things, that Peter Hempel was at a given time t professor, and she may also know that he was in fact identical with Carl Hempel. Therefore, the common noun component *professor* of the partially descriptive names *Professor Peter Hempel* and *Professor Carl Hempel* will stay, we could say, in an inert position in her everyday utterances of (4). It changes the ordinary proper names *Peter Hempel* and *Carl Hempel* into syntactically complex names, but does not provide them with new and significant descriptive semantic power. This semantic inertness of the property designator *professor* shows, in my view, that regarding first-order content there is no significant difference between (1) and (2), and similarly, (3) and (4) do not differ in their expressed semantic content.

So it seems that Soames's general formula *the* x: $Dx \,\&\, x = y$ does not represent accurately the hidden informational structure of these names, when D is interpreted semantically. This formula should be reinterpreted in a way which fits better with the cognitive competence conditions mentioned above.

5. Conclusion

As we saw before, there are good reasons for Soames and other contemporary Millians to accept **C3**. They are entitled to say that partially descriptive names must express semantically contingent properties of their designated objects across normal contexts involving competent speakers. We also saw, however, that prior to using such names in declarative sentences competently speakers must possess some discriminating background knowledge about their designated objects. This is why I doubt that there is a direct way to meet condition **C3**.

It seems likely therefore that the main thesis of Soames's attractive theory fails, and partially descriptive names lack semantically valuable descriptive information; perhaps they are not names at all.[13] At the same time, I am convinced that this failure does not threaten Soamesian Millianism about ordinary proper names. The above-mentioned two conditions **C1** and **C2** provide the strongest evidence why this is so. We may also reject the inherently unstable idea of partially descriptive names and yet still hang on to traditional Millianism in the case of ordinary names.

[13] McKinsey (2004) argues similarly. He claims that Soames has produced no real examples of partially descriptive names.

References

Cappelen, Herman – Ernie Lepore 2004. Insensitive semantics. Blackwell, Malden MA & Oxford.

Geirsson, Heimir 2001. Discovering identity. In: Southwest Philosophy Review 17: 43–57.

Kroon, Frederick 2004. A-intensions and communication. In: Philosophical Studies 118: 279–98.

McKinsey, Michael 2004. Remarks on Scott Soames's *Beyond Rigidity*. Paper presented at the meeting of the Pacific APA Division, Pasadena.

Recanati, François 1993. Direct reference: From language to thought. Blackwell, Cambridge MA & Oxford.

Salmon, Nathan 1986. Frege's puzzle. MIT Press, Cambridge MA.

Segal, Gabriel 2001. Two theories of names. In: Mind & Language 16: 547–63.

Soames, Scott 2002. Beyond rigidity: The unfinished semantic agenda of naming and necessity. Oxford University Press, Oxford.

Sullivan, Arthur 2003. Beyond rigidity. In: Philosophical Books 44: 317–34.

Thau, Michael 2002. Consciousness and cognition. Oxford University Press, Oxford.

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BOOK REVIEWS

René Bannerjea: Eskimos in Europe: How they got there and what happened to them afterwards. Bíró Family Nyomdaipari és Kereskedelmi Vállalat, London & Budapest, 2004, 470 pp.

This book deserves our attention from two particular points of view: the topic of the Eskimos (Inuits) and the author's personal background. It deals with the Eskimos who went willingly or were captured and taken away to Europe (Scotland, England, and Denmark). However, its main focus is on the first and not always peaceful contacts with these aboriginals and on a detailed account of the discovery of Greenland, Baffin Island and Labrador recorded from the first voyages of the Vikings up to the expeditions in the mid-19th century.

As to the person of the writer, René Bannerjea was born in 1914, son of an Indian ethnologist and an English mother. His mother tongue is English but he mastered several languages. He accompanied his father to Hungary where, after having enrolled to the Eötvös College in Budapest, he studied Hungarian and Uralic languages (as well as Eskimo, a Paleo-Siberian language). Bannerjea did his PhD and afterwards he taught English in the College as a lecturer. Having married a Hungarian woman, Bannerjea spent eight years in Hungary up to the end of the forties. He learned Hungarian excellently; he even published translations from Hungarian poets into English and French and also some of his own poems (*Ma route vers toi. Poèmes sur la Hongrie.* Budapest 2001, 2 vols).

In the volume reviewed here, the author meticulously compiled all the available data on the topic in 25 chapters, based on descriptions of voyages, diaries, articles of contemporary newspapers and gazettes, paintings and photographs of persons and objects; more than thirty pictures illustrate this book. Especially detailed narratives are devoted to two voyagers and discoverers: Captain Martin Frobisher (1535–1594) and Captain Charles Francis Hall (1821–1871); see pp. 43–84 and 256–330.

Some of the Eskimos in question, hardly more than 200 in number, subsequently returned to their homeland while others remained in Europe. They excited wide interest and spectacle in several European countries. Their physical appearance, their garments, their skill in making tools, in paddling, in kayak manoeuvring (and the kayak itself) were a great attraction at that time.

In addition to the physical abilities of the Eskimos, most of them were baptized and were intelligent, mastered English or Danish excellently, and worked as interpreters. The lives and activities of two persons are especially reported in detail: Jack Sakeous (pp. 171–204) and Hannah (pp. 246–324), the former arriving in Edinburgh in 1816, the latter with her husband and daughter in 1854 in London. Sakeous' portrait appears on the back cover of this volume, and that of Hannah is shown on the front cover.

The arrival of the Eskimos was not only a spectacle for the public; they were also presented to the monarchs, e.g., to King George III and his Queen in 1773 in the Opera House (p. 156), to the Queen of Sweden, wife of Charles XIV (Bernadotte)

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in 1825 (p. 351), to Maximilian IV of Bavaria in Munich in the same year (p. 350). The occasion in that year was a tour of Eskimos in several cities in Central Europe, in Berlin, Leipzig, Dresden, Munich, Prague, Vienna, and also in Pozsony/Pressburg, then capital of Hungary (now Bratislava in Slovakia).

As far as the Inuit linguistic data, words and personal names are concerned, their occurrence is scanty in comparison to the main topic. Moreover, they are mentioned intermittently throughout the book. Most Inuit words and names are clumsily recorded in several variants, e.g., those of Sakeous: Sackhouse, Zaccheus, Zakaeus, Sakaeus, etc. (p. 202), probably from the Inuit root *sak(e)-* 'harpoon' or 'harpoon head', and of Hannah: Tackalictoo, Tookoolito, Tukkulertu, etc. (p. 252, *passim*, 461) from *takalikicaq* 'butterfly' or 'moth' (p. 349). Bannerjea emphasizes (p. 115) that the Eskimo language, a Paleo-Siberian one, can hardly be related to the Uralic or Indo-European languages. The author mostly refers to William Thalbitzer (*A Phonetic Study of the Eskimo Language*, Copenhagen 1904) and Franz Boas (*The Central Eskimo*, Washington 1988–85), well-known experts in Inuit. However, some later works, e.g., S. P. Kleinschmidt's *Grammatik der grönlandischen Sprache*, Berlin 1951, I. Reed and others' *Yupik Eskimo Grammar*, Fairbanks 1978, or S. Jakobson's *Jup'ic Eskimo Dictionary*, Fairbanks 1984, are not covered.

Despite the scarcity of linguistic material, Bannerjea's volume largely contributes to the knowledge of the early contacts between the European peoples and the Inuit; moreover, it is an interesting reading of the cultural history of that area.

István Fodor

Jenő Kiss – Ferenc Pusztai (Hrsg.): Magyar nyelvtörténet [Ungarische Sprachgeschichte]. Osiris Kiadó, Budapest, 2003, 950 pp.

1. Für den Unterricht der ungarischen Sprachgeschichte gab es lange Zeit nur ein Standardwerk im Hochschulwesen: das von Géza Bárczi, Loránd Benkő und Jolán Berrár verfasste Lehrbuch *A magyar nyelv története* [Geschichte der ungarischen Sprache] (Benkő 1967). Das Buch war der Nachfolger der früher in Form von einzelnen Heften erschienenen *Egyetemi Magyar Nyelvészeti Füzetek* [Ungarische linguistische Hefte für den Universitätsunterricht], die aber keine richtigen Lehrbücher waren, sondern eher sprachhistorische Handbücher. Nach dem Erscheinen des einbändigen Kompendiums im Jahre 1967 hat auch László Deme (1968) in seiner Rezension das Ende der Zwangsehe zwischen Lehrbüchern und sprachgeschichtlichen Handbüchern begrüßt. Dieses neue Standardwerk hat lange gute Dienste geleistet: 36 Jahre sind vergangen, bis endlich ein ähnlich voluminöses und gründliches Lehrbuch erschienen ist.

In diesen Jahrzehnten hat sich aber die historische Sprachwissenschaft viel entwickelt. Nach den mehrheitlich auf die Synchronie gerichteten Forschungen der strukturellen und generativen Linguistik haben sich nämlich die historischen Forschungen im letzten Drittel des 20. Jahrhunderts wieder intensiviert — zum Teil durch die befruchtende Wirkung der Soziolinguistik und der Pragmatik. Auch bei der theoretischen Linguistik zeigt sich ein ständig wachsendes Interesse für Fragen des Sprachwandels und dessen mannigfaltige Ursachen. Die traditionelle ungarische Linguistik hat sich inzwischen — zum Teil durch die erfrischende Wirkung der Ergebnisse der strukturellen Richtungen — ebenfalls erneuert: Viele Phänomene werden anders als früher beurteilt und beschrieben.

All das führte dazu, dass seit dem Erscheinen des bisherigen Lehrbuchs bedeutende Fortschritte in den historischen Forschungen des Ungarischen erzielt worden sind: wichtige Standardwerke sind erschienen. Hierzu gehören einerseits die Wörterbücher, die die Herkunft des ungarischen Wortschatzes darzustellen versuchen, also das dreibändige historisch-etymologische Wörterbuch (*A magyar nyelv történeti-etimológiai szótára* [Historisch-etymologisches Wörterbuch des Ungarischen] Bd. 1–3 = TESz.) und dessen später in deutscher Sprache verfasste und auch die neueren Forschungsergebnisse bearbeitende Variante (*Etymologisches Wörterbuch des Ungarischen* Bd. 1–2 = EWUng.). Nicht weniger bedeutend ist die von einer Arbeitsgruppe des Instituts für Linguistik der Ungarischen Akademie der Wissenschaften erarbeitete Historische Grammatik des Altungarischen (*A magyar nyelv történeti nyelvtana* Bd. I, II/1, II/2 = TNyt.). Diese unglaublich gründliche und detaillierte Beschreibung schildert die Morphematik und Syntax des frühen und des späten Altungarischen in drei dicken Bänden und fasst die Ergebnisse der diesbezüglichen Forschungen auf zeitgemäßem Niveau zusammen. Außerdem bietet sie eine Fülle von ausgezeichneten Textbeispielen aus unterschiedlichen Sprachdenkmälern.

Neben diesen Standardwerken sind auch wichtige Quellensammlungen publiziert worden. Zu ihnen gehören die Bände des *Erdélyi Magyar Szótörténeti Tár* [Historisches Wörterbuch des siebenbürgisch-ungarischen Wortschatzes Bd. 1–11], die kritischen bzw. buchstabengetreuen Ausgaben von Kodizes, Glossarien, Briefen und sonstigen Sprachdenkmälern (z. B. die Bände der Serie *Régi magyar kódexek* [Alte ungarische Kodizes]). Auch zahlreiche sprachhistorische Monografien erschienen.

Wenn man all das subsumiert, kann man wohl sagen, dass die Situation eigentlich schon lange reif dafür war, den Studierenden ein neues Lehrbuch der ungarischen Sprachgeschichte in die Hand zu geben; nach langem Warten erschien das ansehnliche Werk im Frühjahr 2003.

2. Das Buch wurde vor allem von Mitarbeitern des Lehrstuhls für Ungarische Sprachgeschichte, Soziolinguistik und Dialektologie der Eötvös Loránd Universität erarbeitet, aber unter den Verfassern befinden sich auch zwei Forscher aus dem Institut für Linguistik der Akademie der Wissenschaften. Die Redigierung haben Jenő Kiss und Ferenc Pusztai auf sich genommen, die selber auch je ein längeres Kapitel geschrieben haben. Die übrigen Kapitel sind die Arbeit von acht weiteren Mitarbeitern, die je ein Teilgebiet ausgearbeitet haben. Die Verfasser gehörten mehrheitlich dem Arbeitskollektiv an, das auch die dreibändige Historische Grammatik des Altungarischen bearbeitet hat, und die überwiegende Mehrheit von ihnen verfügt über jahrzehntelange Erfahrungen im Unterricht bzw. in der Forschung über Themenbereiche der ungarischen Sprachgeschichte.

Das Buch gliedert sich—nach der Einleitung auf Seite 7–9—in zwei unterschiedlich große Abschnitte. Der erste Abschnitt, der die von Jenő Kiss geschriebenen Kapitel beinhaltet, trägt den Namen *Általános kérdések* [Allgemeine Fragen] (11–68), der zweite mit dem Titel *A magyar nyelv története* [Geschichte des Ungarischen] beschreibt den Zustand bzw. den Wandel des Ungarischen in den unterschiedlichen sprachhistorischen Epochen (69–893). Nach diesem Teil folgen noch eine Literaturliste zu Sprachgeschichte und Sprachwandel (895–924), die Auflösung der Quellen und Abkürzungen (925–34), sowie ein Sachwortregister (935–50). Dem Buch wurden außerdem sechs farbige Karten beigefügt, die nützliche und übersichtliche Informationen über die ethnischen Verhältnisse des historischen Ungarn bieten.

3. Der erste wesentliche Unterschied des Buches im Vergleich zum früheren sprachhistorischen Lehrbuch ist der erste Abschnitt selbst. Damals wurden die allgemeinen Fragen des Sprachwandels nur ganz oberflächlich, aber die ungarischen Sprachdenkmäler sehr ausführlich behandelt. Im neuen Lehrbuch ist die Lage gerade umgekehrt: hier werden die Quellen der Sprachgeschichte nur ganz kurz erwähnt (18–22), während Fragen des Sprachwandels relativ ausführlich erörtert werden (23–68). Dieser Unterschied lässt sich auch damit erklären, dass sich dem Lehrbuch später noch ein Hilfsbuch mit dem Titel *Nyelvtörténeti kalauz* [Wegweiser für die Sprachgeschichte] anschließen soll, in dem unter anderem die wichtigsten Sprachdenkmäler (auch mit Bildern) vorgestellt werden.

Das Kapitel stellt unter anderem kurz die verschiedenen Theorien des Sprachwandels (von den Junggrammatikern bis zur historischen Pragmatik) vor, beschäftigt sich mit der Notwendigkeit des Wandels und den Neologismen. Des Weiteren werden die wichtigsten Probleme des Sprachwandels in Form von Fragen und Antworten behandelt. In diesem didaktisch gut aufgebauten Abschnitt werden Fragen beantwortet, wie Warum ändert sich die Sprache?; Wo entsteht Sprachwandel?; Kann man Sprachwandel wahrnehmen bzw. werden Wandelerscheinungen bewusst?; Ist Sprachwandel prognostizierbar? usw. Die Erreichung des didaktischen Zieles wird auch durch die anschließenden Aufgaben gefördert, auf die ich später noch zurückkomme.

4. Eine wichtige Neuerung im ersten Abschnitt ist auch die veränderte Periodisierung der ungarischen Sprachgeschichte (16–7). Einerseits verzichtet man auf die sog. Protoungarische Periode (*előmagyar kor*), da über das Ungarische eigentlich erst ab dem Zeitpunkt gesprochen werden kann, als die Vorfahren der Ungarn sich von ihren finnougrischen Nachbarn getrennt haben. Somit fängt die Geschichte des Ungarischen erst um 1000 v. Chr. an. Die Grenzen der einzelnen sprachhistorischen Perioden bleiben im Großen und Ganzen unverändert, mit Ausnahme der letzten Periode. Das Neuungarische, das in den früheren Arbeiten zu diesem Thema mit der sog. Spracherneuerung (*nyelvújítás*) beginnt und bis heute dauert, wird in dem neuen Lehrbuch in zwei Abschnitte geteilt: in die neuungarische (1772–1920) und in die neuere ungarische Periode (1920–). Diese Aufteilung wurde schon in Kiss (2003) und Pusztai (2000) vorgeschlagen. Der Grund dafür ist, dass im Jahre 1920 im Frieden von Trianon zwei Drittel der ungarischen Gebiete an die benachbarten Länder abgetreten werden musste, und dadurch Millionen von Ungarn am Gebrauch ihrer Muttersprache in den Schulen und der staatlichen Verwaltung gehindert wurden. Das hat negative Spuren auch im Spracherwerb der ungarischen Sprachteilhaber in den benachbarten Ländern hinterlassen: Der Einfluss der dortigen Staatssprachen wurde immer stärker, man kann auch sagen, dass Ungarische wurde eine plurizentrische Sprache. All das rechtfertigt die Einführung einer neuen Periode in der Geschichte des Ungarischen, aber nicht weniger wichtig ist in dieser Hinsicht auch die technische Entwicklung im 20. Jahrhundert, vor allem die informationstechnische Revolution in der Kommunikation (Telefon und Mobiltelefon, Fernseher, Computer und Internet usw.). Die Urbanisierung führt zu Änderungen in den Attitüden der Kommunikationspartner: Die Rolle der Dialekte geht zurück und die der Schichtensprachen nimmt zu. Durch die Massenmedien wächst auch der Einfluss der Standardsprache auf den Sprachgebrauch. Neue Medienformen wie SMS und Chat schaffen einen neuartigen Sprachgebrauch, den man „geschriebene gesprochene Sprache" (*írott beszéltnyelviség*) nennen kann. All das begründet die Einführung einer neuen sprachhistorischen Periode.

5. Der andere — wesentlich längere — Teil des Buches (69–893) will dem Leser die historische Entwicklung des Ungarischen von der urungarischen bis zur neueren ungarischen Epoche nahe bringen. Auch hier geht das neue Lehrbuch anders als sein Vorgänger vor. Während in Benkő 1967 die Beschreibung nach Wandelphänomenen erfolgt (Lautgeschichte, Geschichte der Syntagmen, Geschichte des Satzes usw.), wird hier den sprachhistorischen Epochen der Vorrang gegeben: Die Wandelphänomene werden innerhalb der unterschiedlichen historischen Perioden gesondert behandelt. Damit wird hier die Geschichte des Ungarischen in den einzelnen sprachhistorischen Epochen geschrieben. Diese Vorgehensweise kann sehr glücklich sein, wenn man im Unterricht nach sprachhistorischen Epochen vorgeht, also in unterschiedlichen Semestern alle Wandelerscheinungen einer sprachhistorischen Periode behandelt. Geht man aber möglicherweise nach Wandelphänomenen vor (Lautgeschichte usw.), ist diese Lösung weniger praktisch, da man im Buch hin und herblättern muss. Das wäre natürlich auch kein Problem, wenn nicht die beiden größeren Teile des Buches getrennte Inhaltsverzeichnisse hätten. So findet man auf Seite 5 nur eine ganz grobe Skizze des Inhaltsverzeichnisses, aus der hervorgeht, dass das Buch in zwei größere Kapitel unterteilt ist, während das detaillierte Inhaltsverzeichnis für die Allgemeinen Fragen auf Seite 12 und für die Geschichte des Ungarischen auf den Seiten 70–97 steht. Das macht das Auffinden der entsprechenden Textpassagen etwas umständlich. Bei einer weiteren Auflage könnte man vielleicht darüber nachdenken, ob das ganze Inhaltsverzeichnis nicht am Anfang des Buches stehen sollte, oder — und das wäre vielleicht noch praktischer — die behandelten Wandelphänomene nicht durch unterschiedlich gefärbte oder positionierte Orientierungszeichen am Seitenrand einheitlich markiert werden können (ähnlich wie die Buchstaben in einem Wörterbuch).

Diese strukturelle Konzeption hat auch noch andere Folgen: sie führt — zwangsweise — zu einer gewissen Wiederholung in den einzelnen Beschreibungsebenen. Da man — mit Ausnahme des Bedeutungswandels — alle Ebenen der Sprache in den unterschiedlichen sprachhistorischen Etappen beschreiben wollte, ist es auch unumgänglich, dass gewisse Phänomene doppelt oder dreifach beschrieben werden. Gleichzeitig führt es aber auch zu einigen missglückten Lösungen. Einerseits ist es nämlich verständlich, dass man z. B. im ersten Kapitel über den Wandel des Wortschatzes (S. 173–203) die wichtigsten Wege der Wortschatzerweiterung vorstellen will. Dazu gehören — verständlicherweise — auch solche Lösungen, die erst neuerdings „praktiziert" werden oder für die man aus älteren Zeiten keine Beispiele hat. Trotzdem ist es einigermaßen störend und kurios, dass in einem Kapitel, das die urungarische Periode vorstellt, als Beispiel für die Kontamination ganz neuartige Belege wie *citrancs* ‚vorgeschlagener Name für Grapefruit' oder *csalagút* ‚Name für den Tunnel unter dem La Manche-Kanal' zu finden sind oder als Beispiele für Akronyme Belege wie *Gestapo*, *SS* oder *HIV* vorkommen. Bei den Lehnübersetzungen gibt selbst die Verfasserin (Éva Zsilinszky) zu, dass diese Methode vor allem während der Spracherneuerungsbewegung beliebt war. Die ersten sicheren Belege — nach slawischen Mustern — stammen zwar aus dem Altungarischen, die Vorstellung des Phänomens in der urungarischen Periode ist jedoch etwas missglückt. Wenn man aber das Phänomen schon hier behandelt, hätte man nicht nur die Teilübersetzungen (*natúrszelet* ‚Naturschnitzel', *adatbázis* ‚Datenbank') hier erwähnen sollen, sondern auch das Phänomen der sog. Lehnbedeutungen (*tükörjelentés*), wofür jedoch Beispiele erst auf Seite 810 zu finden sind (*csenget* ‚telefonál', *pénzt cserél* ‚pénzt vált' usw.).

Das aber sind Probleme, die die Brauchbarkeit des Buches nicht verringern, höchstens ab und zu etwas störend wirken. Da aber die meisten von ihnen vor allem im Zusammenhang mit dem Wortschatz vorkommen, hätte man die Irritierungen vielleicht dadurch beseitigen können, dass man auch den Wortschatzwandel von den anderen Wandelphänomenen getrennt und ihm ebenso ein selbstständiges Kapitel gewidmet hätte wie dem Bedeutungswandel. Das wäre auch deshalb möglich gewesen, weil der Wortschatz eigentlich noch weniger Teil der Grammatik ist als die Bedeutung. Auf der anderen Seite garantiert die gewählte Lösung natürlich, dass man die in unterschiedlicher Zeit übernommenen Schichten der einzelnen Lehnwortgruppen in den entsprechenden sprachgeschichtlichen Perioden platzieren kann. Trotzdem wäre m. E. in diesem Fall eine gesonderte Behandlung der historischen Entwicklung des ungarischen Wortschatzes geglückter.

6. Auch die Entwicklung der ungarischen Rechtschreibung könnte man eigentlich in einem selbständigen Kapitel behandeln, da die Rechtschreibung auch nicht zu den Phänomenen der Grammatik gehört. Ihre Behandlung in den unterschiedlichen sprachhistorischen Epochen ist jedoch wesentlich angebrachter als die des Wortschatzes, da sie wesentlich mehr Attribute hat, die nur für gewisse Epochen charakteristisch sind. So ist für das Urungarische der Gebrauch einer Kerbschrift wahrscheinlich, für den Anfang des Altungarischen die Kanzleischrift, später eine Mischung von Kanzleischrift und hussitischer Schrift mit diakritischen Zeichen. Im Mittelungarischen ist eine Teilung zwischen protestantischer und katholischer Schrift zu beobachten usw. Hier ist also eine Aufteilung der Geschichte der Rechtschreibung in unterschiedliche Epochen eigentlich ganz angebracht. Außerdem muss man sagen, dass diese Kapitel, die von Klára Korompay geschrieben wurden, musterhaft kompakt und sehr übersichtlich sind, auch sind gewisse Tabellen über den Lautwert der verschiedenen Buchstaben (z. B. 286, 290) sehr nützlich.

7. Die anderen Kapitel des Buches wollen den Wandel des ungarischen Sprachsystems darstellen. In dieser Hinsicht wird der Akzent eindeutig auf die Struktur- bzw. Systemgeschichte gelegt. Während der Beschreibung ist die eindeutige Tendenz zu beobachten, dass die Verfasser wenn möglich überall versuchen, von konkreten historischen Belegen ausgehend ein Problem zu demonstrieren und dann eine Erklärung für das entsprechende Phänomen zu finden.

Als Muster für diese Kapitel dienten die entsprechenden Kapitel der Historischen Grammatik (TNyt.). Man hat also auch hier versucht, mit Hilfe der Belege scheinbar „synchrone Schnitte" des Ungarischen vorzunehmen und durch ihren Vergleich den Wandel des Ungarischen zu beschreiben. Es wird aber öfters betont (vgl. z. B. S. 66), dass solche Beschreibungen eigentlich nur „pseudosynchron" sein können, da den Forschern nur beschränkt sprachliche Fakten in Form von Belegen zur Verfügung stehen (je mehr man in der Zeit zurückgeht, desto weniger), außerdem hat man auch nicht die Sprach- und noch weniger die Kommunikationskompetenz der damaligen Sprachteilhaber. Die Genauigkeit der Beschreibung hängt auch von der untersuchten Ebene der Sprache ab: Je geschlossener die jeweilige Beschreibungsebene ist, desto besser kann eine ziemlich exakte Systembeschreibung gegeben werden (so z. B. im Phonemsystem oder in gewissen Konjugationsparadigmen) und umgekehrt (z. B. Entwicklung des Wortschatzes oder der Bedeutung) — vgl. S. 67.

Aus historischen Belegen lassen sich also keine richtigen synchronen Schnitte erstellen, schon weil sie — vor allem in älteren Zeiten — aus unterschiedlichen Mundarten

stammen oder zwischen ihnen möglicherweise eine längere Zeitspanne liegt. Daher soll betont werden, dass die untersuchten Perioden höchstens als sprachgeschichtliche Epochen, aber keinesfalls als „Synchronien" betrachtet werden dürfen. So kann man höchstens den Strukturwandel beschreiben, nicht aber den Wandel des Sprachgebrauchs. Ab und zu sind zwar aus den Belegen auch etliche Informationen für den Sprachgebrauch herauszuschälen, sie ermöglichen aber keinesfalls detaillierte Informationen über dieses Phänomen.

Oben wurde schon erwähnt, dass das neue Lehrbuch gewissermaßen dem Muster der Historischen Grammatik (TNyt.) folgt. Die Grammatik konnte aber nur zum Teil als Ausgangsbasis für das neue Lehrbuch dienen, da diese nur die Geschichte des Altungarischen (und zum Teil des Urungarischen) beschreibt und zudem ohne die Lautgeschichte. Für das neue Lehrbuch musste also einerseits die Geschichte des ungarischen Phonemsystems geschrieben werden, andererseits waren alle Problembereiche für das Mittel-, Neu- sowie für das neuere Ungarische auszuarbeiten.

Die lautgeschichtlichen Kapitel hat Erzsébet E. Abaffy bearbeitet. Es ist ihr gelungen, die Fragen des Lautwandels sehr kompakt und allgemein verständlich zu behandeln, wodurch diese Kapitel, die sonst als sehr trocken und „telefonbuchartig" gelten, ganz übersichtlich und leicht zu lernen sind. Die Verständlichkeit verringert aber keinesfalls das wissenschaftliche Niveau: In den Kapiteln werden Fragen der Phonotaktik genauso behandelt wie z. B. die Theorie über das phonologische Feld: auf Grund von Bárczi (1962), aber wesentlich einfacher und übersichtlicher wird z. B. die Geschichte der Explosivlaute im Urungarischen geschildert und auch in Form einer Tabelle dargestellt. Aus dieser lässt sich ablesen, dass gewisse Lautwandelprozesse eine Leerstelle im Phonemsystem verursachen. Diese übt im System einen „Sog" aus, der wiederum die Füllung dieser Leerstelle durch ein neues Phonem bewirkt (S. 117–8).

Während die Kapitel der Lautgeschichte für alle sprachhistorische Perioden neu bearbeitet wurden, sind die Kapitel für die Geschichte der weiteren Ebenen der Sprache unverkennbar auf der Basis des größeren Vorbildes, also der Historischen Grammatik (TNyt.) aufgebaut. Die einzelnen Kapitel mussten natürlich auch für das Altungarische neu geschrieben werden, da die drei Bände der Grammatik etwa 2000 Seiten umfassen und nicht einfach gekürzt werden konnten, auch wenn die Kapitel für das Ur- und Altungarische insgesamt über 450 Seiten umfassen (S. 101–576), also von allen anderen Kapiteln am detailliertesten ausgearbeitet sind. Manchmal hat man sogar das Gefühl, dass sie für ein Lehrbuch vielleicht zu „langatmig" sind: Wenn man heute im Hochschulwesen arbeitet, hat man gewisse Zweifel, ob für die breite Masse der Studenten das Lehrbuch mit seinen insgesamt 950 Seiten nicht doch etwas überdimensioniert ist. Die Praxis wird zeigen, wie gut sich die Studenten das Material für die Prüfungen aneignen werden. Den Verfassern ist aber dieses Problem bewusst: Schon im Vorwort weisen sie darauf hin, dass sie lieber etwas mehr als zu wenig geben wollten, damit auch engagierte Studenten auf ihre Kosten kommen. Außerdem ist es den Lehrern überlassen, was sie aus dem Buch auswählen. Drittens wollten sie nicht einfach ein Lehrbuch erarbeiten, sondern auch ein Handbuch der ungarischen Sprachgeschichte.

Diese Kapitel weisen nicht einfach von der Struktur her die Spuren der Historischen Grammatik auf, sie wurden auch—wie schon erwähnt—von Mitarbeitern gefertigt, die selbst an der Grammatik des Altungarischen mitgewirkt haben oder an deren Fortsetzung arbeiten. Das garantierte, dass die Arbeitsgruppe nach den schon für den großen „Bruder" ausgearbeiteten und bewährten Prinzipien arbeiten konnte. Die einzelnen Mitarbeiter waren für folgende Sachgebiete verantwortlich: Morphemgeschichte—Zsó-

fia Sárosi, Geschichte der Wortarten—Mária D. Mátai, Geschichte der Syntagmen—László Horváth, Geschichte des einfachen Satzes bzw. des Textes—Magdolna Gallasy, Geschichte der zusammengesetzten Sätze—Lea Haader.

Die einzelnen Kapitel sind übersichtlich aufgebaut und gut gegliedert. Wichtige Feststellungen sind durch Fettsatz hervorgehoben, was die Übersichtlichkeit noch erhöht. Außerordentlich nützlich sind auch die vielen Tabellen im Buch. Sehr übersichtlich ist z. B. die zusammenfassende Darstellung der ungarischen Nominalsuffixe im Kapitel der Morphemgeschichte von Zsófia Sárosi oder die Darstellung der Regeln der indeterminierten und determinierten Konjugation im Kapitel über die Geschichte der Syntagmen von László Horváth (S. 360–61 bzw. 442). Neben diesen Tabellen, die eher nur Phänomene zusammenfassen wollen, gibt es auch andere, die den Wandel gewisser Elemente oder Strukturen veranschaulichen (z. B. S. 346, 787, 799, 829–30 usw.) oder aus denen gewisse Zusammenhänge abzulesen sind (z. B. S. 107, 202, 815 usw.).

Im Abschnitt der neueren ungarischen Periode findet man auch die Beschreibung gewisser heutiger Sprachvarianten, wie z. B. die Trennung der Fragepartikel *-e* vom Prädikat (z. B. *Nem-e jött el?* oder *Meg-e jött már?*) oder die Ausbreitung eines neuartigen Hauptsatztyps (z. B. *Természetesen, hogy...*; *Valószínűleg, hogy...* usw.). M. E. ist es sehr positiv, dass die Verfasser diese Formen nur aus sprachhistorischer Sicht betrachten und nicht aus der Sicht der Sprachpflege. So werden die betroffenen Formen nicht als „falsch, fehlerhaft" abgetan, sondern nur als Varianten markiert, oft wird auch darauf hingewiesen, dass es ähnliche Formen schon seit Jahrhunderten gibt. Wenn möglich, wird auch versucht, ihre Entstehung zu erklären (s. z. B. Lea Haaders Ausführungen über mögliche Ursachen syntaktischen Wandels in unserer Zeit, S. 841–4).

Außer den klassischen Beschreibungsebenen der Grammatik wird in jeder untersuchten sprachhistorischen Periode auch die Ebene des Textes untersucht. Die Absicht, auch den Text in die Untersuchung einzubeziehen, ist eigentlich lobenswert und verständlich, da man so vom Phonem bis zum Text alle Sprachebenen berücksichtigt. Die Untersuchungsmethoden der Textlinguistik sind jedoch selbst für heutige Texte weniger ausgereift und da somit auch ihre Ergebnisse wesentlich geringer. Keinesfalls kann man aber Texte im Urungarischen untersuchen, man hätte m. E. auf dieses Kapitel im Abschnitt des Urungarischen bewusst verzichten können. Da dies nicht geschah, konnte man—zwangsläufig—nur zu ganz allgemeinen Vermutungen kommen, wie z. B. „A megnyilatkozások és csoportjaik rövidebb vagy hosszabb volta terén a rövidségnek kellett inkább dominálnia" [Was die Kürze oder die Länge der Äußerungen oder ihrer Gruppen betrifft, muss wohl die Kürze dominiert haben] (S. 274) oder „Az az általánosság mondható ki, hogy kellett lennie változásnak a szövegalkotás terén is, például az élőbeszéd jellege módosulhatott, a szövegtípusok köre is bővülhetett... [Allgemein kann gesagt werden, dass es auch in der Textverflechtung einen Wandel gegeben haben muss, so konnten sich z. B. die Eigenarten der gesprochenen Sprache verändert und sich auch der Kreis der Texttypen erweitert haben...]".

Aber nicht nur mit dem Urungarischen gibt es auf diesem Gebiet Probleme: Die Textlinguistik des Altungarischen ist zwar relativ gut zusammengefasst, da dafür die entsprechenden Kapitel aus der historischen Grammatik zur Verfügung standen. Für die weiteren Perioden ist aber diese Ebene bei weitem nicht so gut ausgearbeitet wie die anderen Untersuchungsebenen, meistens befassen sich nur ein oder zwei Seiten mit dieser Problematik, und die Feststellungen sind oft auch ziemlich allgemein. Um der Gerechtigkeit willen sollte man aber auch erwähnen, dass die anderen Wandelphäno-

mene mindestens in Form wissenschaftlicher Artikel oder früherer Handbücher für das Mittel- und Neuungarische wesentlich gründlicher untersucht worden sind, während für die Geschichte des Textes die Grundforschungen noch ausstehen.

8. In den Kapiteln, die die Wandelerscheinungen der neuungarischen Periode beschreiben, findet man auch noch sehr gute Zusammenfassungen über den Wandel gewisser Phänomene durch die ganze ungarische Sprachgeschichte. So ist z. B. Mária Mátais kompakte Zusammenfassung über die Entstehung bzw. den Wechsel der Wortarten sehr nützlich, und auch die anschließende Tabelle bzw. die Abbildung über die wichtigsten Tendenzen des Wortartenwechsels sind sehr lehrreich und übersichtlich (S. 828–30). Eben wertvoll ist auch der kurze Abschnitt, in dem Éva Zsilinszky den Wandel des ungarischen Wortschatzes überblickt: Wir bekommen Informationen über die sich ändernde Struktur der Wörter und erfahren, dass wegen Änderungen der phonotaktischen Regeln die Proportionen zwischen Vokalen und Konsonanten anders geworden sind. Auch die Wortlänge ist gewachsen, und durch die unterschiedlichen Wortbildungsmethoden ist auch der Anteil der motivierten Wörter gewachsen. Man findet in diesem Abschnitt interessante Tabellen über die Anteile der unterschiedlichen etymologischen Gruppen im Wörterbuch und über die prozentuale Verteilung der einzelnen Lehnwortgruppen in Texten aus dem 20. Jahrhundert. Diese Zusammenfassungen sind also sehr nützlich und es ist nicht ganz verständlich, warum sie nicht für alle Beschreibungsebenen (so auch für die Morphematik oder die Syntax) erarbeitet wurden.

9. Oben wurde schon erwähnt, dass der Bedeutungswandel nicht nach sprachhistorischen Perioden dargestellt wurde, sondern ein selbstständiges Kapitel bekam. Diese Lösung ist absolut verständlich und zu begrüßen, da die Tendenzen und Wege des Bedeutungswandels wichtiger sind als die Frage, wann es bei einzelnen Wörtern zu diesem Wandel kam, was auch schwer feststellbar ist. Bedeutungswandelphänomene haben meistens auch keine zeitlichen Grenzen, es geht hier vor allem um kognitive Prozesse, die zeitlich unbegrenzt sind. In diesem von Ferenc Pusztai bearbeiteten Kapitel findet man eine—auf Gombocz' und Ullmanns Semantik basierende—Typologie des Bedeutungswandels mit klaren und verständlichen Beispielen. Auch die Gründe des Bedeutungswandels werden gut zusammengefasst (S. 854–60). Richtig fand ich dabei, dass unter den Ursachen auch die Tabus erwähnt werden, diesen (und den Euphemismen, die zur Vermeidung von Tabubruch dienen) kommt nämlich m. E. beim Bedeutungswandel eine wesentlich größere Rolle zu, als das ihnen in manchen Arbeiten zur historischen Semantik beigemessen wird.

10. Nach dem Kapitel über den Bedeutungswandel folgt eine Literatur in Auswahl (S. 895–924). Es wird von den Herausgebern auch betont, dass es sich hierbei um eine Auswahl handelt: sie entstand durch die Zusammenlegung von Teilbibliographien, in denen die Verfasser der einzelnen Kapitel diejenigen Arbeiten aufgelistet hatten, die für sie—aus inhaltlichen oder methodologischen Gründen—wichtig waren. So werden hier Arbeiten, die etwas veraltet sind und eher der Wissenschaftsgeschichte angehören, nicht angegeben. In der immer noch ziemlich detaillierten Liste finden sich eher Arbeiten der neueren sprachhistorischen Forschungen und—in geringerer Zahl—Arbeiten zur beschreibenden Linguistik des Ungarischen sowie Arbeiten über Sprachwandel und Sprachgeschichte in fremden Sprachen. Diese breite Auswahl ist für Studenten, die sich in die einzelnen Themenbereiche vertiefen wollen, sicherlich eine große Hilfe.

Nach dem Literaturverzeichnis folgt noch die Auflösung der Quellenangaben und anderer Abkürzungen (S. 925–34) sowie ein gut strukturiertes Sachregister (S. 935–50),

das zusammen mit dem ebenfalls sehr detaillierten Inhaltsverzeichnis sichert, dass die Benutzer des Buches ziemlich leicht diejenigen Passagen finden, die Antworten auf ihre Fragen geben. Die Ausführlichkeit des Inhaltsverzeichnisses ergibt sich daraus, dass die einzelnen Kapitel sehr durchstrukturiert und in viele kleine Unterabschnitte gegliedert sind. Gerade dadurch kann man aber die gesuchten Textstellen schneller auffinden.

Wie oben schon erwähnt, befinden sich am Ende des Buches einige farbige und sehr informative Karten mit den Anteilen der ungarischen Bevölkerung und anderer Nationalitäten im historischen Ungarn. Durch sie erhält man ein aufschlussreiches Bild über die Verbreitung der ungarischen Sprache im Karpatenbecken im 11. Jahrhundert, über die ethnischen Verhältnisse in Siebenbürgen im 13. Jahrhundert, über die ethnischen Verhältnisse Ungarns im 15., 18. und 20. Jahrhundert sowie über die Verteilung der Dialektregionen im heutigen Ungarn.

11. Zusammenfassend ist festzustellen, dass es den Herausgebern und Verfassern gelungen ist, mit dem Buch ein Werk zu schaffen, das die Geschichte des Ungarischen vom Urungarischen bis zur neueren ungarischen Periode nach den neueren Erkenntnissen und Methoden der sprachgeschichtlichen Forschungen darstellt und das Ganze in den Rahmen einer zeitgemäßen Theorie des Sprachwandels einbettet. Das Buch ist nicht einfach ein Lehrbuch, es soll gleichzeitig auch ein Handbuch der ungarischen Sprachgeschichte sein. In dieser Hinsicht ist es wichtig, dass die Ergebnisse der Historischen Grammatik (TNyt.) für das Altungarische gut zusammengefasst wurden, wodurch das Material wesentlich leichter „verdaulich" wurde. Einen weiteren Gewinn für die historische Forschung bedeutet, dass auch die späteren sprachhistorischen Perioden des Ungarischen bearbeitet wurden — wenn auch nicht mit der Gründlichkeit der Historischen Grammatik, aber nach den gleichen Prinzipien. Schließlich ist auch beachtenswert, dass die ungarische Lautgeschichte für alle historischen Perioden neu bearbeitet und gut verständlich dargestellt wurde.

Auch wenn das Buch als Lehrbuch manchmal zu umfassend wirkt, ist es für den Hochschulunterricht auf jeden Fall gut geeignet, zumal wenn die Lehrer aus dem Material auswählen. Das Buch hat aber auch noch weitere Charakterzüge, die es in didaktischer Hinsicht auszeichnen. Sehr gut sind nämlich die Aufgaben nach den einzelnen Kapiteln und die weiterführenden Literaturangaben. Letztere beinhalten oft auch Arbeiten, in denen man eventuell auch andere Erklärungen als im Buch findet. Man wollte nämlich die Debatten über etliche Phänomene nicht in das Lehrbuch hineinarbeiten. Deshalb gibt der Text den Standpunkt der Verfasser bzw. Herausgeber wieder, während man andere Auffassungen in den angegebenen Arbeiten nachschlagen kann. Diese sind oft auch für die Lösung der nach den Kapiteln stehenden Aufgaben wichtig. Was diese betrifft, behandeln sie Themen verschiedenen Umfangs: manche kann man bis zur nächsten Seminarstunde bearbeiten, manche wiederum fordern längere Forschungsarbeit und können auch als Ausgangsbasis für Diplomarbeiten oder sogar Dissertationen dienen. Diese Aufgaben sind schon deswegen sehr nützlich, weil sie eine Art Werkstattarbeit für den Unterricht anbieten: daran mangelt es nämlich am meisten in dem heutigen Massenunterricht der Hochschulen.

Der Band will nach der Absicht der Herausgeber nicht nur die Studenten und Dozenten an den Universitäten und Hochschulen ansprechen, sondern auch die Ungarischlehrer der Oberschulen. Aber nicht nur sie, sondern alle, die Interesse am Sprachwandel und vor allem an der Geschichte des Ungarischen haben, können darin Antworten auf ihre Fragen erhalten.

Tamás Forgács

Literatur

Bárczi, Géza 1962. A finnugor zárhangok ősmagyar kori történetéhez [Zur Geschichte der Explosivlaute im Urungarischen]. In: Magyar Nyelv 58 : 1–10.

Benkő, Loránd (Hrsg.) 1967. A magyar nyelv története [Die Geschichte des Ungarischen]. Tankönyvkiadó, Budapest.

Benkő, Loránd (Hrsg.) 1967–1976. A magyar nyelv történeti-etimológiai szótára [Historisch-etymologisches Wörterbuch des Ungarischen] Akadémiai Kiadó, Budapest (= TESz.).

Benkő, Loránd (Hrsg.) 1991–1995. A magyar nyelv történeti nyelvtana [Historische Grammatik des Ungarischen]. Akadémiai Kiadó, Budapest (= TNyt.).

Benkő, Loránd (Hrsg.) 1993–1994. Etymologisches Wörterbuch des Ungarischen. Akadémiai Kiadó, Budapest (= EWUng.).

Deme László 1968. A magyar nyelv történetéhez — *A magyar nyelv története* kapcsán. [Zur Geschichte des Ungarischen — anhand der *Geschichte des Ungarischen*]. In: Magyar Nyelv 64 : 14–23.

Kiss, Jenő 2003. A magyar nyelvtörténet korszakolásához [Zur Periodisierung der ungarischen Sprachgeschichte]. In: Magyar Nyelv 99 : 385–92.

Pusztai, Ferenc 2000. A XX. század műveltségváltásai és nyelvi változásai [Kulturwandel und Sprachwandel im 20. Jahrhundert]. In: Magyar Nyelv 96 : 385–91.

Szabó T., Attila (Hrsg.) 1975–. Erdélyi magyar szótörténeti tár [Historisches Wörterbuch des siebenbürgisch-ungarischen Wortschatzes]. Bd. 1–11. (Herausgeber ab Bd. 8: Márta Vámszer). Kriterion, Bukarest.

Mária Ladányi – Csilla Dér – Helga Hattyár (eds): „... még onnét is eljutni túlra". Nyelvészeti és irodalmi tanulmányok Horváth Katalin tiszteletére ["... getting even beyond that...". Linguistic and literary studies in honor of Katalin Horváth]. Tinta Könyvkiadó, Budapest, 2004, 499 pp.

This volume contains fifty-nine studies honoring Dr. Katalin Horváth, associate professor of the Department of General and Applied Linguistics at Eötvös Loránd University in Budapest, on the occasion of her 60th birthday.

The book starts with a preface by the editors followed by Dr. Horváth's professional *vita*, a *tabula gratulatoria*, and two congratulatory pieces (by Levente Bokor and Sándor Iván Kovács). The *vita* also includes Dr. Horváth's publication list. Most of her work has been published in Hungarian but she has two articles written in Esperanto about the semantics of this language and one paper in English: "The connection between the part and whole in forming sentences" (*Annales Universitatis Scientiarum Budapestiensis, Sectio Linguistica*, Tomus XXIII. 1992–1998, 208–220). While several of the studies in the volume are devoted to topics particularly akin to Dr. Horváth's work, László Elekfi's paper situates her work on subject-predicate relations within the general framework of Dr. János Zsilka.

The range of topics covered matches the broad spectrum of the honoree's œuvre of the past 35 years. The papers are presented under five topical headings:

- descriptive grammar, historical linguistics, and etymology (with papers by József Attila Balázsi, Ilona Csilla Dér, László Elekfi, Mária Ladányi, Attila Mártonfi, Mária D. Mátai, Renáta Németh, Giampaolo Salvi, Attila Starčević, Lajos Pál Tóth, Tibor H. Tóth, and Erzsébet Zelliger);
- semantics, lexicography, and stylistics (Edit Dési, Éva Gerevich-Kopteff, Ágnes S. Huszár, Gábor Kemény, Gábor Kiss–Márton Kiss, Viktor Nagy, Mihály Péter, and Éva Katalin Varga);
- history of linguistics, cultural history, and onomasiology (Tamás Bécsy, József Beke, Edit G. Bogár, Géza Füssi Nagy, Piroska B. Gergely, Ferenc Havas, Annamária Kabán, Árpád Kovács, Kinga Körmendy, Réka Lőrinczi, Kinga Márkus, Mariann Slíz, Lívia Sója, Ágnes Stemler, Enikő Szíj, and Zsuzsa Vladár);
- natural and planned languages, language usage, and language pedagogy (Éva Andó, Csilla Bartha, Gyöngyi Boldog, Helga Hattyár, Rita Hegedűs, Ilona Kassai, Klára Korompay, Ilona Koutny, Jenő Lőrincz, Péter Simoncsics, Katalin Szili, and Balázs Wacha); and
- literary theory, analysis of prose and poetry (Ildikó Boros, Erzsébet Fehér, Emese Hadas, Anna Han, Géza S. Horváth, Katalin András Jobbágy, Géza Kállay, Huba Mózes, Barna Oravecz, Géza Orlovszky, and Marcellina Spannraft).

All but two of the papers are written in Hungarian. The two English-language papers are "An analysis of reference formulation in discourse" by Gyöngyi Boldog, which is a discourse study of a sociolinguistic interview recorded in the USA; and "'The fragrance in your worship's imagination' and 'the phantom of our own selves': a reading of Hawthorne's *Rappaccini's daughter* through E. T. A. Hoffmann's *The sandman*"—an analysis by Géza Kállay of two works by N. Hawthorn from the angle of Hoffmann's aesthetics. Kállay suggests a possibly mutual influence between the two authors.

A brief review cannot do justice to the wealth of data and analyses offered by this significant volume. (The full table of contents is available on the publisher's web page: http://www.tintakiado.hu.) Below, I will merely highlight studies that speak to seven issues central to general linguistics. These topics are linguistic categories, word formation, etymology, inflection, metaphors and metonymy, first language acquisition, and second language pedagogy.

The characterization of syntactic and morphological **categories** is the theme that links the articles by Ilona Csilla Dér, Attila Mártonfi, Giampaolo Salvi, and Zsuzsa Vladár. Dér traces the history of certain postpositional constructions in Hungarian showing that they have arisen from adverbial participles (converbs) through grammaticalization. She concludes that the graduality of this historical process rules out the categorial identification of the various constructions that existed at various stages. Mártonfi analyzes the Hungarian possessive affix *-é* (e.g., *János-é* 'that of John') and concludes that it is a bound demonstrative pronoun. It is interesting that this conclusion is supported by the English translation equivalent of the construction, which also includes a demonstrative. In the course of the analysis, Mártonfi also discusses the definitional characteristics of the various kinds of Hungarian pronouns. Salvi provides a historical analysis of two syntactic patterns—the *si*-construction in Standard Italian, and the subjunctive in Rheto-Romansh—to show how syntactic categories evolve as the function of diachronic principles coupled with sheer chance. Vladár's study relates to the thorny problem of defining particles and fitting them into a system of word classes. She analyzes the use of the term in 17th century Latin grammars

of Hungarian and concludes that the usage has its roots both in Ancient Greek and Roman grammarians and in Latin grammars of Hebrew and English written in the 16th and 17th century.

Word formation is a central topic of the papers by Ilona Koutny and Mária Ladányi. Koutny's focus is a comparison of word formation in a planned language—Esperanto—and in natural human languages. She concludes that while the principles of Esperanto word formation are present in natural languages as well, the difference is that Esperanto applies these principles with perfect regularity: "what is semantically possible is realized morphologically" (368). Based on an extensive corpus study, Ladányi describes the formal and semantic characteristics of two Hungarian diminutive affixes (*-ka/-ke* and *-cska/-cske*) and asks why these characteristics are the way they are. Her explanations are in part diachronic, in part functional. For example, she explains why the latter affix is the more productive of the two by appeal to a principle by W. U. Dressler, according to which two-syllable words are optimal lexemes. Since *-ka/-ke* is directly affixed to noun stems while *-cska/-cske* is always preceded by a linking vowel if the stem ends in a consonant, one-syllable nouns affixed with *-ka/-ke*, yielding two-syllable words, are more likely to be lexicalized than one-syllable consonant-final words affixed with *-cska/-cske*, in which case the resulting word is trisyllabic.

Two of the papers on **etymology** (a recurrent topic in Dr. Horváth's scholarship) are by Attila József Balázsi and Renáta Németh. Balázsi investigates the origins of the Hungarian word *róka* 'fox'. He concludes that the root of the word, shared also by *ravasz* 'sly', goes back to the root *ró* meaning 'kill, destroy' (formerly 'cut'), and shows how the evolution of the form and the meaning of the word received support both from trends in phonological, morphological, and semantic change in Hungarian and from general patterns of naming animals across languages. Németh takes up the history of the word pair *dulakodik* 'to scuffle' and *tülekedik* 'to jostle'. She traces them back to a single form and a single meaning ('to fight with fists') and by supporting the relevant phonological and semantic changes with analogous examples she characterizes the broader system into which this pair of words fit.

An outstanding feature of Hungarian **verb inflection** is the differentiation of the subjective and objective verb paradigms. Lajos Pál Tóth analyzes the cooccurrence constraints between the verb forms and the various pronominal objects and notes the unique, extra-paradigmatic status of the verbal affix *-lak/-lek*, used only if the subject is first person singular and the object is second person singular or plural.

Metaphors and metonymy have been recurrent themes in Dr. Horváth's work and thus it is fitting that three of the papers in the volume should focus on these topics. Éva Gerevich-Kopteff reports on the Finnish translations of some metaphors in the poems of the 20th-century Hungarian poet Miklós Radnóti and notes a number of inevitable shifts in imagery and focus in the Finnish version. Gábor Kemény's paper is about descriptive metaphors in Hungarian—that is, expressions that describe a notion periphrastically while also involving a metaphor. An example is the expression *fekvő rendőr* 'lying-down (prostrate) policeman' for speed bumps placed across streets to make drivers slow down. Using the example of E. A. Poe's famous poem *The raven*, Géza S. Horváth shows how words of ordinary language blossom into poetic tools through the poet embedding them in a network of metonymic and metaphoric relations with other words.

Éva Andó's and Csilla Bartha's studies address various aspects of **child language acquisition**. Based on examples of dialogues collected by her that involve a child's narrative, Andó shows how narration prompts the development of basic conceptual

categories and of basic communicative skills. Bartha's essay is concerned with the linguistic development of deaf children. While in Hungary, deaf children are educated with emphasis on oral language—Hungarian—she suggests that a bilingual approach whereby the child is taught both the ambient language of the country and sign language is the optimal solution.

The role of grammar teaching in **second language pedagogy** is a much-debated issue everywhere. Rita Hegedűs provides a brief historical overview of the literature and, while she is for a functional, rather than strictly grammar-based, approach, she emphasizes the significance of conscious—rather than merely intuitive—competence. She also notes that teaching the grammar of foreign languages presupposes some knowledge of the native-language grammar. Klára Korompay reports on her experiences in teaching Hungarian to speakers of French focusing on the difficulties related to the subjective and objective verb conjugations. She provides a helpful chart summarizing the major conditions under which the two verb paradigms are used and offers a flow-chart for students that lists the steps that need to be taken for the construction of syntactically, morphologically, and phonologically correct verb forms. Based on contemporary diary notes, correspondence, and other documents, Kinga Körmendy presents a delightful account of how the Austrian-born wife of the great 19th century Hungarian statesman István Széchenyi strove to acquire the Hungarian language for the sake of her beloved husband.

In conclusion: thanks to its varied content and insightful analyses, this book has something to offer to almost everybody who is interested in Hungarian linguistics and in general linguistics. The transparent organization of the volume, its pleasing format, and the very fact that this worthwhile collection came to life bear witness to the three editors' competence and care, and to their warm devotion to the honoree.*

Edith Moravcsik

Yuri Alekseevich Tambovtsev: Tipologija funktsionirovanija fonem v zvukovoj tsepochke indoevropejskih, paleoaziatskih, uralo-altaiskih i drugih jazykov mira: kompaktnost' podgrupp, grupp, semej i drugih jazykovyh taksonov [A typology of the functioning of phonemes in sound sequences in Indo-European, Paleo-Asiatic, Ural-Altaic and other languages of the world: The compactness of subgroups, groups, families and other language taxons]. Sibirskij Nezavysimyj Institut, Novosibirsk, 2003, 143 pp.

The book under review is a welcome addition to Tambovtsev's theories, methods and sets of data published earlier (Tambovtsev 1994a,b; 2001a,b). I think that linguistics requires new data to support or to reject classical theories. More often than not, linguists argue about this or that linguistic theory (e.g., the Uralic or Altaic language communities) without any new data at hand. This new book by Yuri Tambovtsev provides such new data. Speaking about the application of statistical methods in linguistics,** one must agree with Chris Butler that statistical techniques are often highly

* I am grateful to Mária Ladányi for her comments on a previous version of this review.

** Being a linguist by education, I naturally would not have been confident enough to discuss statistical methods without the help of specialists in mathematical

relevant for linguistic research because without them it is difficult to understand the linguistic phenomenon under investigation. It is especially important in any type of study involving differences in people's linguistic behaviour or in the patterns of languages themselves (Wray et al. 1998, 255). Tambovtsev provides a large number of data on the phonological statistics of languages. He is one of the very few linguists who combine phonology with stylistics and typology (Teshitelova 1992, 157–81). In this book, as in his previous books, Yuri Tambovtsev considers the typology of regulation and chaos of the distribution of consonant phonemes in sound sequences in the languages of the world. In fact, Tambovtsev concentrates on variability in sound sequences. He adds essential insights to his theory and methods in the monograph under review, especially concerning phonostatistical universals in Finno-Ugric, Turkic, Indo-European and other languages. The author examines the homogeneity of texts in various languages from the point of view of the occurrence of phonemic groups in their sound sequences with the help of phonological statistics. Tambovtsev also investigates the rules of sound sequence division, as well as the frequency of occurrence of certain groups of consonants in the phonemic systems of various languages. Many new languages are investigated by this method, in comparison to his previous books (Tambovtsev 1994a,b; 2001a,b). In fact, Yuri Tambovtsev has computed phonostatistical data on the occurrence of labial, coronal (i.e., front-lingual), palatal (mediolingual), back (velar, pharyngeal or glottal), sonorant, occlusive, fricative (constrictive) and voiced consonants in a large number of languages. This comprises eight phonological features. The articulation systems of these languages are also briefly discussed. There is also a short review of the ethnic history (ethnogenesis) of the nations speaking these languages. The author takes it to be of great importance to analyse language contacts during the history of their ethnic development. As far I am aware, Tambovtsev's first article in the field of phonological statistics was published in 1976. So, he has been working on the problems mentioned above for a long time, i.e., for some 30 years. Unfortunately, I cannot mention all his publications since he is the author of eight monographs and about 250 articles on language typology, phonostatistics and phonetics. His studies involve the phonology of 156 languages of the world. In the book under review, Tambovtsev's conclusions are based on the data of the frequency of occurrence of phonemes in languages of the following families and groups:

1. The Indo-European language family (including Indo-Aryan (8 languages), Iranian (4 languages), Celtic (1 language), Italic (1 language), Romanic (5 languages), Germanic (7 languages), Baltic (2 languages), Slavonic (8 languages), genetically isolated Indo-European languages (5 languages), and an artificial language).
2. The Ural-Altaic language community that includes the Uralic and Altaic language communities:

    A. The Uralic language community: the Finno-Ugric language family, including Ugric (5 languages), Permic (2 languages), Volgaic (5 languages), and Balto-Finnic (9 languages), as well as the Samoyedic language family (3 languages).

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statistics. I must thank Arkadiy Shemiakin, Vadim Efimov, Leonid Frumin and Valeriy Yudin for consultations and generous advice.

B. The Altaic language community: the Turkic language family (22 languages) and the Mongolian language family (3 languages).

3. The Tungus-Manchurian language family (6 languages).
4. The Yeniseyic language family (1 language).
5. The Caucasian language family (2 languages).
6. The Paleo-Asiatic language family (8 languages).
7. The Sino-Tibetan language family (2 languages).
8. The Afro-Asiatic language family (3 languages).
9. The Bantu language family (2 languages).
10. The Austro-Asiatic language family (2 languages).
11. The Austronesian language family (5 languages).
12. The Australian language family (6 languages).
13. The language community of American Indians (20 languages).

As a linguist I often feel I must use statistical methods in my studies of English, German, and other languages. However, it is hard for a linguist to understand how to use them correctly, but at the same time in the easiest way. The author of the book teaches us how to do it. He does it on the example of the following methods of statistical calculation: standard quadratic deviation, variation coefficient, level of significance, confidence interval, the T-criterion of Student, the criterion of Kolmogorov–Smirnov, Chi-square criterion, and Euclidean distance. He also shows how to measure the statistical reliability of linguistic results. Very often a linguist, who is a layman in linguistic statistics, may draw the wrong conclusions because his results are not statistically reliable. The book by Yuri Tambovtsev focuses not only on the mathematical statistical methods that he employs in his linguistic research: it also discusses important problems of the classification of languages. The author touches on topics of the reliability of mathematical statistical methods in linguistics; but the target of his research is to compare various languages within a single family as well as languages belonging to different families and groups. For this, Tambovtsev has generated mean values of frequency rates of various phonemes and phonemic groups. These mean values provide reliable correlations across languages. There are several mathematical methods allowing estimations of variation of major statistical values. Tambovtsev aims to estimate regularities in the use of particular phonemes or phonemic groups in particular languages. He has chosen several methods of variability estimation and described techniques of their application to phonological studies. In this respect, the issues of sample size are important: the larger the sample, the more reliable the results will be. One of the most important problems is that of the size of the portions (units) into which a text is divided. The portion should not be too small or too large. Tambovtsev takes the generally accepted sample portion in phonological research to be 1000 phonemes. He separates all his texts of the languages under discussion into units comprising 1000 phonemes each. In statistics, the most reliable results are obtained on large samples. Thus, Tambovtsev argues that the minimally necessary sample should include not less than thirty thousand phonemes.

The author applies, among other methods estimating statistical variation, the method of evaluation of mean quadratic deviation. The mean quadratic deviation

index is used in generating other evaluating indices. Quadratic deviation indices generated for two different texts can be compared if the sample sizes of the base texts are equal. Standard deviation data cannot be compared if the samples of texts are not equal in size. In cases where the sample sizes are different, other mathematical functions must be used. Tambovtsev chooses the estimation of confidence interval, "chi-square" criterion, coefficient of variance, etc. In my opinion, it is important to provide the reader with exact examples of how to calculate the mean quadratic deviation or standard deviation because a layman in phonostatistics, like myself, may do it in the wrong way. Yuri Tambovtsev provides us with data on the occurrence of labial consonants in some Old English texts: Beowulf, Ohthere's and Wulfstan's Stories, the Description of Britain, Julius Caesar, etc. He compares the use of labials in Old English to their use in Modern English.

Variation coefficient represents another important tool in comparative linguistic research. It helps us compare incommensurable values. As it was stated above, the mean quadratic deviation characterises the degree of deviation of the frequency rate of a particular phoneme from the mean value. However, the mean quadratic deviation values do not take into account the fact that the number of labial phonemes is larger than that of medio-lingual (palatal) phonemes. Consequently, the absolute mean index of labial sounds is considerably larger than that of the palatal ones. On the other hand, coronal phonemes are usually more frequent than labial ones. This heterogeneity of features asks for additional methods of comparison, i.e., the variation index called the "coefficient of variance". Unlike mean quadratic deviation, the coefficient of variance allows correlation of frequency rates of those phonemes and phonemic groups that have produced different mean values. It is possible to make the measure of variability comparable by using the coefficient of variation. It can be used in linguistics in the way recommended by Fallik and Brown (1983, 111–2) for the behavioural sciences. The coefficient of variation is used as an indicator of the variation/stability of particular linguistic elements in a sample. The larger the value of the variation coefficient, the higher is the variability of a particular phonological feature (phonemic frequency in this case).

Another important statistical notion is significance level. In his research, Yuri Tambovtsev chose the significance level value of 0.05, or 5%. To my mind, he chose it correctly since such a level of significance is usually used by the majority of researchers in linguistics and phonology. This significance level (i.e., 5%) tells us that we have 95% confidence in our linguistic research. This significance level, I believe, is important in any linguistic research, but especially important for correlations carried out on small samples, i.e., in samples of less than thirty thousand phonemes. Confidence interval evaluation is closely related to other statistical procedures like estimations of the minimum necessary sample at a fixed significance level. Tambovtsev proposes to invariably fix it at 5%. A higher level of significance usually requires larger samples, and thus, a lot more labour than necessary. In certain cases, one is advised to use the values of confidence interval. Confidence interval evaluation is more reliable for phonological research since it provides us with greater precision. The general rule is this: the narrower the confidence interval, the higher is the homogeneity of the parameter under discussion, i.e., a frequency parameter of a particular phonemic class or phoneme in speech. Usually, a text allows us to obtain narrower confidence intervals than a collection of phrases and words. In his book, the author finds a correlation between these three important parameters: sample size and confidence interval at a

fixed significance value. The available data have shown that the greater the sample size, the lower is the confidence interval at a fixed significance level in all languages of the world, irrespective of their genetic affiliation or grammatical type.

Tambovtsev has also paid attention to the reliability of statistical results obtained in the course of his phonological research. He has received indices representing statistical error resulting from the fact that each sample represents only some portion of the general language aggregate. Such indices are called representation errors. The value of representation error depends mostly on sample size and on the variation rate of a particular parameter. It is noteworthy that texts in different languages produce similar levels of representation error, irrespective of their morphological structures. This fact suggests a certain universal for phonemic groups of consonants functioning in genetically unrelated languages. However, I think that Tambovtsev has applied the strictest way of estimating representation error. On the one hand, this is inconvenient, since it requires larger samples for a fixed error value (e.g., 5% or less), but, on the other hand, it means that one can be surer of one's linguistic results.

Yuri Tambovtsev mentions that many linguists who use statistics do not know that the T-test or "Student's" criterion was proposed by William Gosset, and not by some scholar called Student. "Student" was the name that William Gosset assumed as a pseudo-name. The Student's criterion is employed in cases where it is necessary to compare two mean values found for two different texts. The reliability of difference between two mean values depends on the variability of parameters involved and on the size of the samples for which these variables have been generated. The "Student's" criterion can be applied for variables subject to normal dispersion. Within a sample of not less than 30 units, dispersion is considered normal. In the course of research, the "Student's" criterion has been calculated for two samples of the equal size of 31 thousand phonemes. On the one hand, a scientific text was compared with a text of fiction, and on the other hand, two scientific texts were compared. The value of the former is nearly four times higher than that of the latter. This convinces us that the "Student's" criterion can be safely applied for the stylistic analysis of texts.

The statistical criterion called Kolmogorov–Smirnov test provides researchers with a mathematical method of analysis that does not depend on the restrictions that normally apply to statistical analyses. It concerns the following conditions: (1) Statistical analyses are carried out with independent accidental variables; (2) Aggregates of accidental variables should demonstrate close mean and dispersion values; (3) Aggregates should comply with the law of normal dispersion. The Kolmogorov–Smirnov criterion belongs to the so-called "robust" non-parameter methods, which are not sensitive to deviations from standard conditions. Low values of the Kolmogorov–Smirnov (K–S) criterion mean that the fluctuation of the linguistic parameters analysed is minor, that is, not linguistically significant. Tambovtsev argues that low values of the K–S criterion in his research support his hypothesis on a normal dispersion of the eight groups of consonants established within sound sequences. The representation of any language with the help of eight groups of consonants has served as a basis for his phonostatistical research.

Tambovtsev also employs the "chi-square" criterion in his investigations. With the aid of this criterion, he estimates differences between the empirical and expected values. If the difference is insignificant, it can be a result of accidental deviation. Otherwise, it reflects significant differences between factual (empirical) and expected (theoretical) values of frequencies of phonemic group occurrences in speech. Bolshev

and Smirnov (1983, 166–71) have generated a list of maximum frequency values reflecting insignificant fluctuations of variables with the "chi-square" technique, which Tambovtsev describes on page 33. It is quite convenient because usually linguists do not have books on statistics at hand. Christopher Butler recommends the chi-square test to measure the independence vs. association of linguistic units in various sorts of linguistic material (Butler 1985, 118–26). Tambovtsev shows how to use it on the material of the occurrence of labial consonants in a sample of British and American prose (Agatha Christie, John Braine, Somerset Maugham, Jack London, Francis Scott Fitzgerald, Ernest Hemingway, etc.). The chi-square values show that labials are distributed rather homogeneously. Tambovtsev draws the attention of the reader to the importance of calculating the degrees of freedom correctly (p. 30). He also compares the distribution of labial, coronal, palatal, and velar consonants in Kalmyk (a Mongolian language) and Japanese (a genetically isolated language), though not by this statistical criterion (p. 31). However, the same criterion shows close similarity between the distribution of five consonantal groups in Turkish and Uzbek (p. 32). The T-coefficient is less than 1 for 5 parameters, i.e., coronal, palatal, velar, sonorant and occlusive. Tambovtsev explains T-coefficient as the ratio of the obtained chi-square values and the theoretical values that can be found in the chi-square tables. If the T-coefficient is less than 1, the statistical results are similar (pp. 31–3). It also shows close similarity between some other Turkic, Finno-Ugric, Samoyedic, Tungus-Manchurian, Slavonic, Germanic, Iranian and other Indo-European languages inside their taxons.

Chapter 2 is devoted to issues of the genetic and typological classification of languages of the world. The author does not go into details on debates concerning inclusion of certain languages in particular genetic groups and families, or the identification of a particular language variety as a separate language or a dialect. The major aim of the author is to provide a technique that allows linguists to check the rightfulness of the inclusion of a particular language in a certain language group or family. Before analysing the compactness of subgroups, groups, families and other language taxons, Tambovtsev warns the reader that the problem of the division of languages into families has not been completely solved. For instance, it is quite necessary to discuss the problem if Turkic languages constitute a family in themselves or a branch in some other family, called the Altaic family. Actually, Turkic languages are considered to form a family by some linguists (e.g., Baskakov 1969 and other Russian linguists). However, some other linguists, especially those in the West, consider Turkic languages to be a group within the Altaic family spoken in Asia Minor, Middle Asia and Southern Asia (Voegelin–Voegelin 1977; Katzner 1986, 3). The other two branches of the Altaic family are Tungus-Manchurian and Mongolian. To my mind, it is more logical to consider Turkic languages a family, rather than a subgroup within the Altaic family. Altaic languages should be called a super-family, *Sprachbund*, language community or unity, since the true genetic relationship of Turkic, Tungus-Manchurian and Mongolian languages have not been proved. If one goes along this line, then all languages on the Earth may be called one family with lots of groups and branches. On the other hand, it is not productive to set up a separate language family consisting of a single language. For instance, in the 1960s Ket was considered an isolated language of the Paleo-Asiatic family (Krejnovich 1968, 453). However, today it is considered to form the so-called Yeniseyan family, consisting of only one language with its dialects and subdialects. Summing up the modern view, David Crystal remarks that Yeniseyan is a family of languages generally placed within the Paleo-Siberian group, now repre-

sented by only one language—Ket, or Yenisey-Ostyak (Crystal 1992, 424). I do not think it is wise to multiply language families in that manner. Other linguists (e.g., Ago Kunnap, Angela Marcantonio, etc.) question the very existence of the Uralic language family (Marcantonio 2002). Among other language families, Tambovtsev describes the Finno-Ugric family. He argues that this language family includes two major groups: the Balto-Finnic and Ugric groups. The author considers the theories of those linguists who identify the following four groups in the Finno-Ugric family: (1) The Balto-Finnic group including Estonian, Finnish, Karelian, Vepsian, Izhorian, Votic, Livonian, and Saami (possessing some specific features); (2) The Volgaic group including Erza-Mordvinian, Moksha-Mordvinian, Mountain Mari, and Lawn or Meadow or East Mari; (3) The Permic group comprising Udmurt, Komi-Zyrian, and Komi-Permian; and (4) The Ugric group comprising Hungarian, Mansi, and Khanty; as well as the Samoyedic language family comprising the Nenets, Selkup, Nganasan, and Enets languages.

Finno-Ugric and Samoyedic are said to form the Uralic language unit. Tambovtsev argues that until the present, no proto-language of this unit has been established. The languages of the Uralic unit do not form a compact unity from the point of view of dispersal and frequency of phonemic groups. With the aid of the coefficients that Tambovtsev calculated in his studies, the author has shown that the consonant indices and the compactness (dispersion) coefficients suggest a more compact unity for the Samoyedic language family (mean V = 18.29%; T = 0.16) than for the Finno-Ugric (mean V = 24.14%; T = 0.47). The Uralic language unity shows even more dispersion (mean V = 28.31%; T = 0.57). This fact has been interpreted as supporting the idea that languages of the Samoyedic and Finno-Ugric families are more closely related to one another within the family than between the families. Thus, the idea of the Uralic taxon as a language family should be either rejected or considered with caution (p. 125). The Turkic language group includes Azeri, Baraba-Tatar, Bashkir, Gagauz, Karaim, Dolgan, Kazakh, Kamasin, Karakalpak, Karachai-Balkarian, Kirghiz, Crimea-Tatar, Kumyk, Nogai, Tatar, Tofalar, Tuvin, Turkish, Turkmenian, Uzbek, Shor, and Yakut. The author argues that a Turkic proto-language can be regarded as a real parent language for all the Turkic languages. He points out that the Turkic proto-language (*Ursprache*) demonstrates closer relations to any of the present Turkic languages than these languages may have between one another today. However, he did not include Proto-Turkic in his studies because of the uncertainty in the pronunciation. The Mongolian language family includes only three languages: Buriat, Kalmyk, and Mongolian. It is the minimum possible group for statistical analysis. The Tungus-Manchurian language group includes 10 languages: Manchurian, Nanai, Negidal, Oroch, Orok, Solon, Udege, Ulchi, Evenk (Tungus), and Even. Inclusion of the Turkic, Mongolian and Tungus-Manchurian language families into one language unity represents a debated topic in linguistics today.

The Indo-European language family seems to be the most thoroughly investigated one. Major linguistic methods of investigation and comparative linguistic analysis were elaborated during the long history of studies of European languages. However, currently the major question concerning the existence of a single Indo-European proto-language has not been resolved. It is noteworthy that many linguistic debates have been carried out in terms of "similarity" and "linguistic distance". Yet, the terms themselves have not been clearly defined. Tambovtsev thinks that at the present state of understanding, modern languages represent either products of divergence or those

of the reverse process, i.e., convergence. In a historical perspective, both processes produced their impacts on the development of languages. Tambovtsev agrees with those researchers who think that the origin of all Indo-European languages from a single proto-language is mere fiction, while their co-existence and convergence in their development resulting in the appearance of certain common features is a scientific fact. The noted uniformity of the Indo-European languages can be explained as a secondary, later phenomenon, and differentiating features represent the original and early characteristics of each language of this family. However, no classifications other than the genealogic one have been elaborated, and Tambovtsev accepts the classification of the Indo-European family into the Indian, Iranian, Baltic, Slavonic (including Eastern, Western, and Southern Slavonic as sub-groups), Germanic, Romanic, and Celtic language groups.

Following Illich-Svitych, Tambovtsev believes that the Nostratic language unity can serve as a good model for linguistic investigations of various sorts, but he does not think these languages should be considered a language unity; moreover, this rather arbitrary construct is not recognised by all linguists. The Nostratic language unity includes the following language families: Indo-European, Finno-Ugric, Samoyedic, Turkic, Mongolian, Tungus-Manchurian, Cartvelian, and Semito-Hamitic. Tambovtsev proposes a concept of compactness for linguistic studies. He defines compactness as a measure for more or less closely related languages within language sub-groups, groups, families, etc. In other words, he attempts to measure the distance between languages within analysed taxons or clusters. The distances are measured on the basis of frequency rates of particular linguistic (phonological) characteristics. The author uses the concepts of image recognition and regards language families as units with a more or less compact structure. In the branch of applied mathematics called pattern recognition, images of various sorts are recognised. One can consider language to be a sort of such image. Therefore, one can use the methods of pattern recognition to develop various types of classifications based on exact values of some coefficients (Zagorujko 1999, 195–201). The generated index of compactness can be regarded as an indicator of the opposing process of diffusion. Values of frequency rate of particular parameters should not considerably deviate from the mean value established for a given language family or group. If the values of deviation are considerably higher than the established mean value, the given language does not belong to the language family under discussion. If the majority of languages produce these deviation indices higher than the mean value, we should state that the languages under study do not form a language group but rather a set of separate languages. Tambovtsev has forwarded the hypothesis that the typological similarity of languages can be tested by statistical methods resulting in generating a set of indices described above. The hypothesis claims that when a language is included in a particular language group, the generated indices of this new formation will show either a higher or lower degree of compactness. Closely related languages would increase the compactness indices and vice versa. The author illustrates this assumption by a series of examples. Thus, he analyses frequency rates of labial consonants in the Turkic languages compared to Mongolian. The frequency of labial consonants in Mongolian is 7.52%. In the Turkic languages the relevant figures vary from 5.98% to 12.80%. The total fluctuation index is 6.28, the difference between the neighbouring languages is 0.49. The Altai language has produced the lowest index of labial consonant frequency, while Karakalpak has shown the highest index. The Turkic languages can be classified in the following way

by the labial consonant frequency indices: Karakalpak—12.80%; Turkish—10.41%; Uighur—9.83%; Azerbajani—9.66%; Uzbek—9.42%; Kumandin—9.22%; Baraba-Tatar—9.04%; Turkmen—8.50%; Kirghiz—8.43%; Kazakh-Tatar—8.03%; Kazakh—7.99%; Hakas—7.82%; Yakut—6.10%, and Altai—5.98%. The place of the Mongolian language (7.52%) is between Hakas and Yakut suggesting that the distribution of labial consonants is more similar in these three languages compared to other languages of the Turkic group. The Mongolian group has produced the following indices: Mongolian (7.52%), Buriat (7.67%), and Kalmyk (6.65%). These distribution indices fall within the same range as above—from 5.98% to 12.80%, while the total fluctuation and the difference between the neighbouring languages are lower (1.02 and 0.34 respectively). The Uralic language unity yields labial frequency indices in the range of 7.71%—13.72%, the difference between the neighbouring languages being 0.30. Indices of a language group compounding Mongolian and Tungus-Manchurian languages are from 7.52% to 12.46%, with mean difference of 0.70 between the neighbouring values. Consequently, we may infer considerable differences in the sound sequences of the Mongolian and the Tungus-Manchurian languages.

On the contrary, the introduction of the Mansi language belonging to the Finno-Ugric language family, on which language Turkic and Mongolian did not produce considerable influence, into the Turkic languages increases the diffusion index of this group. Consequently, the Mansi language, unlike Mongolian, does not belong to the Turkic language group. Analysis of frequency rates of the coronal consonants may serve as another example of the compactness of Turkic and Mongolian languages. Coronal consonants represent the most frequent sounds in the Turkic languages as well as in many other languages of the world. The range of frequency of coronal sounds in the Turkic languages varies from 32.35% to 40.24%. The overall fluctuation index is 7.89, the difference between the neighbouring languages (the mean difference) is 0.564. In Mongolian, the range of frequency of coronal sounds is 36.57% of the total number of sounds. The mean difference for a compound group of Turkic languages and Mongolian becomes lower (0.526). The relevant figures found for the Uralic languages are: frequency range 24.79%—36.78%; the fluctuation index is 11.99; the mean difference is 0.6. Apparently, the Turkic language group is more compact than the Uralic. The Mongolian and Tungus-Manchurian language families have yielded similar indices in the range of 17.31% to 36.57%; the fluctuation index is 19.26; the mean difference is 2.75. Paleo-Asian languages represent a still less compact group: their frequency rates vary from 20.02% to 36,74%; the fluctuation index is 16.64; the mean difference is 2.38.

The author provides frequency indices on many languages and language groups. In order to show the general tendency in the distribution of speech sounds, he proposes to use the general coefficients of variation resulting from adding generated indices on each group of phonemes. He also uses the T-coefficient, which is generated on the basis of the "chi-square" index, as a reference index. The resulting general coefficients of variation (V) allow him to form the following sequence. The Ugric language group demonstrates the highest diffusion (V = 221.27%, T = 3.77). The Balto-Finnic languages yield V = 185.90%, T = 2.79. The group of Volgaic languages is the most compact group with V = 143.19%, T = 1.02. Another interesting method of comparative analysis implies the introduction of isolated Asian languages into various language families in order to establish possible relationships. Thus, introduction of the Ket language into the Finno-Ugric family (V = 193.13%, T = 3.77) results in a higher diffusion (V = 198.04, T = 3.94). The same procedure with Yukaghir yields V = 199.17%; with Korean

V = 199.24%, T = 3.88; with Japanese V = 200.51%, T = 3.91; Nivkhi yields V = 206.48%. On the contrary, Chinese has shown closer similarity with the Finno-Ugric languages: V = 190.01%, T = 3.65. As a result of his investigations, Tambovtsev has come to the following conclusions:

(1) Coronal and occlusive consonants are the most evenly distributed across language families.

(2) Voiced consonants represent the most variable feature; some languages have no category called "voiced" consonants at all.

(3) The Mongolian language family is the most compact one by the sum total of the values of the coefficient of variation based on seven major groups of phonemes (without voiced consonants) and the coefficient T. The consequence with respect to the sum total of the coefficient of variation has been established as follows: the Mongolian, Samoyedic, Turkic, Tungus-Manchurian, and Finno-Ugric language families exhibit less and less compactness, in that order. The Paleo-Asiatic language family yields the highest diffusion (i.e., the lowest compactness) indices and consequently can be regarded not as a language family but as a loose language unity or community.

(4) The general tendency has been shown that in general a language sub-group is more compact than a group, and a group is more compact than a language family. The least compact, that is, the loosest, is the language super-unity comprising all the languages of the world.

(5) The collection of two language groups or two families into one unit results in higher diffusion rates than those characteristic of the original taxons.

All in all, I can say that this book by Yuri Tambovtsev is a solid and profound investigation in the comparative analysis of the languages of the world. The author provides numerous tables with indices and coefficients generated through various techniques for a large number of languages. The analysis of these data provides linguists with a method of linguistic investigation on the basis of numerical procedures. The book contains a large list of references. It is recommended to those students who are interested in phonology, linguistic statistics and the typology of languages. I think that, at the moment, many linguists are concerned with minor linguistic problems within a single language. Linguistics lacks books like this that deal with the modern classification of languages. Tambovtsev's book may give us new material for such language classifications.

Ludmila Alekseevna Shipulina

References

Baskakov, Nikolai Aleksandrovich 1969. Vvedenie v izuchenie t'urkskih jazykov [Introduction to the study of Turkic languages]. Nauka, Moskva.

Bolshev, Login Nikolaevich—Nikolai Vasilyevich Smirnov 1983. Tables of mathemetical statistics [in Russian]. Nauka, Moskva.

Butler, Christopher 1985. Statistics in linguistics. Blackwell, Cambridge MA & Oxford.

Crystal, David 1992. An encyclopedic dictionary of language and languages. Blackwell, Cambridge MA & Oxford.

Fallik, Fred – Bruce Brown 1983. Statistics for behavioral sciences. The Dorsey Press, Homewood, Illinois.

Katzner, Kenneth 1986. The languages of the world. Routledge & Kegan Paul, London.

Krejnovich, Eruhim Abramovich 1968. Ketskij jazyk [The Ket language]. In: Jazyki narodov SSSR. Tom 5. Mongol'skie, tunguso-man'chzhurskie i paleo-aziatskie jazyki. [The languages of the USSR. Volume 5. Mongolian, Tungus-Manchurian and Paleo-Asiatic languages], 453–73. Nauka, Moskva.

Marcantonio, Angela 2002. The Uralic language family: Myths and statistics. Blackwell, Cambridge MA & Oxford.

Tambovtsev, Yuri 1994a. Dinamika funktsionirovanija fonem v zvukovyh tsepochkah jazykov razlichnogo stroja. [The dynamics of the functioning of phonemes in sound sequences in languages of diverse structure]. Novosibirsk University Press, Novosibirsk.

Tambovtsev, Yuri 1994b. Tipologija uporjadochennosti zvukovyh tsepej v jazyke. [A typology of the order of sound sequences in language]. Novosibirsk University Press, Novosibirsk.

Tambovtsev, Yuri 2001a. Kompendium osnovnyh statisticheskih harakteristik funktsionirovanija soglasnyh fonem v zvukovoj tsepochke anglijskogo, nemetskogo, frantsuzkogo i drugih indoevropejskih jazykov. [A compendium of the major statistical characteristics of the functioning of consonant phonemes in sound sequences in English, German, French, and other Indo-European languages]. Novosibirsk Classical Institute, Novosibirsk.

Tambovtsev, Yuri 2001b. Nekotorye teoreticheskie polozhenia tipologii uporjadochennosti fonem v zvukovoj tsepochke jazyka i kompendium statisticheskih harakteristik osnovnyh grupp soglasnyh fonem. [Theoretical concepts of the typology of the order of phonemes in language sound sequences and a compendium of statistical characteristics of the main groups of consonant phonemes]. Novosibirsk Classical Institute, Novosibirsk.

Tambovtsev, Yuri 2003. Lingvisticheskaja taksonomija: kompaktnost' jazykovyh podgrupp, grupp i semej. [Linguistic taxonomy: the compactness of language subgroups, groups and families]. In: Baltistika 37 : 131–61.

Teshitelova, Marie 1992. Quantitative linguistics. John Benjamins, Amsterdam & Philadelphia.

Voegelin, C. F. and F. M. Voegelin 1977. Classification and index of the world's languages. Elsevier, New York.

Wray, Alison – Kate Trott – Aileen Bloomer – Shirley Reay – Chris Butler 1998. Projects in linguistics: A practical guide to researching language. Arnold, London & New York.

Zagorujko, Nikolaj Grigorjevich 1991. Applied methods of data and knowledge analysis [in Russian]. Institute of Mathematics of the Siberian Branch of the Russian Academy, Novosibirsk.

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HUNGARIAN BOOKS ON LINGUISTICS

László Cseresnyési: Nyelvek és stratégiák, avagy a nyelv antropológiája [Languages and strategies, or, the anthropology of language]. Tinta Könyvkiadó, Budapest, 2004. 387 pp.

This is a handbook of sociolinguistics written for students and researchers who want to become immersed in the relevant literature. It covers all areas of research on language-and-society and includes a list of as many as 2810 references. A 'Glossary of sociolinguistic concepts' at the end of the book lists the English, German, French, Russian, Japanese and Chinese equivalents of approximately 300 Hungarian terms of sociolinguistics. In addition to Hungarian, English, and other oft-cited languages, several further — especially Asian — languages are mentioned, given that the author thinks that one cannot talk about the diversity and multifariousness of languages without actually mentioning large numbers of languages. As the Chinese saying goes: "He who wants to know what a pear tastes like will have to taste a pear."

Contents: 1. Principles and paradigms (How abstract is linguistics?; Linguistics as (almost) a natural science; Sociolinguistics: the birth of a paradigm?); 2. Codes, skills, and strategies (What is 'communicative competence'?; Linguistic politeness, formality, honorificness; Codes and manipulations; Speech, writing, and literacy); 3. Languages in language (Types of language varieties; Slang, jargon, argot; Male language, female language ($1 + 1 = 1$); Linguistic variables, language change and speaker's age); 4. Facts and judgements (National norm: politics or aesthetics?; Norms, academies, laws; Puristic superstitions — in Hungary and with other nations; Linguistic awareness, linguistic value judgement); 5. Geolinguistics: languages of the world and world language (Language or dialect?; The demography of languages — and what surrounds it; Language and nation; "Important" languages, "equal" languages and the European Union); 6. Multilingualism, language planning, linguistic rights (Mother tongue, command of language, and a typology of bilingualism; Language planning, standardisation, koiné; Cold days on both sides of the border; Human rights and language-related rights); 7. Linguistic ecology: contacts and conflicts (Language contacts and integration; Pidgins and creoles; The life, death, and resurrection of languages); 8. Sign languages and artificial languages (Sign languages; Secret, imagined, and universal-philosophical languages; Artificial auxiliary languages and world language); Glossary of sociolinguistic concepts; Bibliography; Index of names and subjects.

Ferenc Kiefer: Lehetőség és szükségszerűség: Tanulmányok a nyelvi modalitás köréből [Possibility and necessity: Papers on linguistic modality]. Tinta Könyvkiadó, Budapest, 2005. 144 pp

The author is the most renowned Hungarian expert on modality; his papers on the topic are among the most valuable pieces of the international literature on issues of linguistic modality. In this volume, many ideas that first appeared in his papers on modality written in the past twenty-five years reappear in a unified framework; but

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the material found here is more than a simple summary of earlier studies in at least two respects. First, the author has taken the recent literature, both in Hungary and abroad, into consideration: practically all theoretically relevant work that has been published in the past decades on modality has left its trace on the present book, especially its first chapter. And second, what is far more important, the analyses in the second, third, and fourth chapters rely heavily on the Hungarian National Text Corpus. What is new here, then, and not only within Ferenc Kiefer's oeuvre but also within the relvant international literature, is that the analyses are corpus-based. But the corpus has not only been used by the author in order to support his earlier ideas by real, rather than made up, examples: rather, it has made it possible for him to reveal novel, intriguing aspects of the topics discussed.

Contents: Introduction; 1. On the concept of modality; 2. The semantics of the modal suffix *-hat/-het* 'may' and of the modal auxiliary *kell* 'must'; 3. The semantics of the auxiliary *tud* 'can'; 4. Pragmatic aspects of modality; 5. Outlook; Literature; Index.

Christopher Piñón – Péter Siptár (eds): Approaches to Hungarian, Volume Nine: Papers from the Düsseldorf Conference. Akadémiai Kiadó, Budapest, 2005. 333 pp.

Volume nine of the series presents papers from the Sixth International Conference on the Structure of Hungarian (ICSH–6) held at Heinrich-Heine-Universität in Düsseldorf, Germany, on 12–13 September 2002.

The topics discussed include a conception of morphology in which every morpheme is treated as a lexical item; the behaviour of /j/, /v/, and /h/ with respect to voicing assimilation; an analysis of verbal particles in which their presence or absence is determined by the event structure of the sentence; two types of long-distance focus-raising in Hungarian; a new typology of question words in terms of Functional Grammar; problems for a purely stress-driven account of focus movement; an analysis of complex event nominals accounting for their striking clausal properties; various conversion phenomena in Hungarian; an analysis of the linking properties of nominalizations and participles in Lexical Functional Grammar; single and multiple *wh*-fronting; an optimality-theoretic analysis of the distribution and behaviour of *H*-type segments; the issue whether Hungarian has portmanteau agreement; and past tense suffixation discussed in terms of the principle of contrast and the principle of uniformity of paradigmetically related inflected forms.

Contents: Towards a totally lexicalist morphology (Gábor Alberti, Kata Balogh, Judit Kleiber and Anita Viszket); Another look at the misbehaving segments of Hungarian voicing assimilation (Sylvia Blaho); First steps towards a theory of the verbal particle (Katalin É. Kiss), Two strategies of focus-raising: movement and resumption (Judit Gervain); The typology of question words in Hungarian (Casper de Groot); Is "focus movement" driven by stress? (Julia Horvath); Nonfinite clauses in derived nominals (István Kenesei); Conversion in Hungarian (Ferenc Kiefer); Nominalization, participle formation, typology, and Lexical Mapping Theory (Tibor Laczkó); Triggering *wh*-fronting (Balázs Surányi); Hungarian *H*-type segments in Optimality Theory (Szilárd Szentgyörgyi and Péter Siptár); Hungarian has no portmanteau agreement (Jochen Trommer); Re-presenting the past: Contrast and uniformity in Hungarian past tense (Viktor Trón and Péter Rebrus); Contents of previous volumes; List of cases in Hungarian.

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(1) (a) A sólymaid elszálltak
the falcon-gen-pl-2sg away-flew-3pl
‘Your falcons have flown away.’

Examples can be referred to in the text as (1a), (1a–d), etc.

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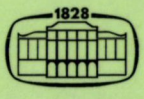

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Acta Linguistica Hungarica, Vol. 52 (4), pp. 341–366 (2005)

COGNITIVE GRAMMAR: THE STATE OF THE ART AND RELATED ISSUES: AN INTERVIEW WITH RONALD LANGACKER*

JÓZSEF ANDOR

Abstract

In this interview with the founder of cognitive grammar as a model of description the following major issues have been raised and discussed: (i) relations between models of cognitive linguistics: cognitive grammar vs. construction grammar; (ii) the nature of lexical representation: the scope of wordhood vs. expressions; (iii) the nature and role of domains vs. types of conceptual structure such as scenes, frames, and scripts; (iv) the status and scope of active zones in linguistic description; (v) the nature of economy in linguistic representation at various levels—lexical semantic vs. lexical pragmatic issues; (vi) the treatment of part of speech relatedness in cognitive grammar, with special emphasis on the status of adjectives; (vii) the notion of linguistic modularity.

ANDOR: *Thank you very much for accepting my call for an interview. I am honored to have a chance to talk to one of the founding fathers of cognitive linguistics, founder of the paradigm called cognitive grammar, in Budapest. My first question particularly concerns the relation between cognitive linguistics and cognitive grammar itself as a model. In the course of the past few decades cognitive-based studies of language have gained more and more ground, mainly as an alternative to the Chomskyan type of generative grammar and other types of formalistic or logically based linguistic theoretical paradigms. A number of models have been presented. We have to note, however, that an important common feature of all of them is that they are deeply rooted in studying the cognitive sources or bases of language, linguistic representation and expressibility. That is to say, they all share a common core: cognition. How do you view your own model, that of cognitive grammar, which I think constitutes one*

* This interview was recorded at Eötvös Loránd University, Budapest, on December 6, 2004. Special thanks go to Professor Zoltán Kövecses in helping to organize it.

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of the mainstreams of research with such a bias, among the varieties of models of cognitive linguistics? Basically, I would like you to comment on the relation and differences between the so-called 'cognitive linguistics' and 'cognitive grammar'.

LANGACKER: I am not sure that there are differences. How much is subsumed under cognitive linguistics, of course, is a very flexible matter. It could be construed very broadly. Some people would include, for example, Jackendoff's work under cognitive linguistics. I generally include Anna Wierzbicka's work under cognitive linguistics, and construction grammar in its various guises. So it is a broad view that could be construed more narrowly, e.g., to include people who would normally go to the ICLC (the International Cognitive Linguistics Conference). That would, for example, exclude Jackendoff, and I would also exclude him from cognitive linguistics (in the narrower sense) due to his belief in the autonomy of grammar. Thus, instead of saying that cognitive grammar is different from cognitive linguistics, I would say that it is only one version of it. Arguably, however, it is the best articulated and worked out as a comprehensive framework, with the possible exception of construction grammar (in which many more people are specifically working). Cognitive grammar is meant to be a potentially comprehensive model of language structure. I've tried to design it in such a way that it can be an umbrella for all the varied research done in cognitive and even functional linguistics. Many different levels and dimensions of linguistic structure can be approached through cognitive grammar, even if they have not been equally explored. For example, there can and should be a cognitive phonology. I have discussed numerous aspects of phonology in various places, although I have not tried to work out a comprehensive account (not having been trained as a phonologist). I think there can and will eventually be a cognitive lexicography using the ideas of cognitive grammar. Sociolinguistic questions, diachronic problems like grammaticization, language acquisition—these can all be approached using the cognitive grammar framework. So even though relatively few people in cognitive linguistics actually do cognitive grammar per se and work out descriptions in terms of it, I still think of it as a potential umbrella, as something which can ultimately model the various results being achieved in cognitive linguistics.

ANDOR: *Recently, one can experience some sort of a merging, or at least some sort of a linking between cognitive grammar and a more and more intensively emerging field: construction grammar. You yourself tackled the relations between these models in your plenary lecture given*

recently at an important conference on cognitive linguistics in Logroño, Spain (2003). Let me add to this that Ray Jackendoff, who still considers himself a generativist, has also recently expressed his sympathy with constructionist types of grammar. Do you think that construction grammar, as outlined by Croft, Goldberg and others, and your model of cognitive grammar should go together as parallel, but quite closely related models, or perhaps, that they could or even should be merged in some way?

LANGACKER: I think you have to separate the basic idea of constructionism from the more general ideas of cognitive grammar and cognitive linguistics. Even people in generative grammar now talk more in terms of templates and constraints than in terms of rules (in the classic sense of rewriting rules and derivations from underlying structures). So I think the basic idea has basically been established quite broadly. It was fundamental to cognitive grammar from the start, many years ago. It has become common even in generative approaches. And of course it is a basic notion of Fillmore's construction grammar: the idea that constructions are the basic objects of description is one parallelism between construction grammar and cognitive grammar.

ANDOR: *I did not refer to Fillmore as he never published the book version of it.*

LANGACKER: That's right. In any case, these ideas were worked out independently at about the same time. I didn't talk about 'constructions' as the object of description—that was originally Fillmore's term. I never thought to use the term, but if you look at my model, that's exactly what it is, of course. So there are many similarities between construction grammar (in all its versions) and cognitive grammar, just because of that common starting point: constructions as the basic objects of description, as well as a basic vehicle of description. Also the idea that constructions reduce to form-meaning pairings. That's a common idea, up to a point. There are also many differences which I have talked about in various places, one being that paper from the Logroño conference, which will soon be published in a volume based on the conference proceedings.

There I looked particularly at Croft's radical construction grammar (2001) and Goldberg's version of classic construction grammar (1995). There's one major difference, which is really the fundamental difference between cognitive grammar and those other kinds of construction grammar. It reflects the fact that Fillmore and the people who have followed him have never even tried to totally reduce grammar to meaning and symbolic relationships. There are still—and this is what I tried to point

out at various places—vestiges of autonomous grammar in construction grammar. As formulated, this is true of both Croft's version and Goldberg's version. It is apparent when they talk about what goes into a form-meaning pairing. As for meaning, people working in construction grammar tend not to do very much with it, at least with meaning in my sense of the term. They don't get into the details of construal, and they usually don't bring in metaphor, fictivity, or mental spaces. These fundamental matters tend to be omitted in construction grammar, at least in practice. I don't know how people feel about it in principle. But certainly, basic ideas like construal, profiling, trajector-landmark organization, perspective, metaphor, etc. are not very visible in their analyses. Still, there is agreement that meaning figures in grammatical description. Now what about form? In discussions of construction grammar, what is referred to as 'form' includes not just phonology, but also grammatical form. Indications of grammatical category (like noun and verb) and grammatical relations (like subject and object) are adopted as semantically unanalyzed notions. Though subsumed under form, they are not phonological and not perceptually observable. What I tried to show in the paper mentioned, among other things, was that in cognitive grammar 'form' is limited to phonology and other symbolizing structures —e.g., gesture—but does not include syntactic categories, nor grammatical relations. Despite the traditional terminology, referring to these as matters of 'form' is inappropriate. I analyze those notions in terms of symbolic relationships. A noun, for example, is not something which has a meaning, a phonological representation, and another aspect of form, namely its status as a noun. Rather, it is something which has a meaning and a phonological representation, being a noun precisely because of what kind of meaning it has. Status as a noun is not something distinct. So, whereas in the other versions of construction grammar the 'form' part of form-meaning pairings includes aspects of grammar, for me form is limited to phonology (and other symbolizing structures). All aspects of grammar are inherent in the pairing of those other two. Grammar is not something that participates in symbolic relationships as part of what is doing the symbolization. Rather, it is implicit in the symbolic relationships themselves, where these reduce to meanings and phonological structures.

ANDOR: *One of the interesting issues related to your theory concerns the status and scope of the linguistic notion and concept of 'word'. You don't seem to use the notion to serve as a linguistic unit. What you do use,*

systematically, is the term 'expression'. However, 'expression' seems to have a broader status in your theory. One can say, it has even a different scope. I mean, even full utterances can be taken to be expressions, but single lexical items can also have such a status. If I understand you correctly, expressions emerge as units in discourse, which suggests to me that they are units of performance, and that thus they have a high rate of flexibility of content under the dominance of the particular 'domain' that they linguistically map. Can you clarify and outline the notions of 'expression' and 'lexical item' as linguistic units in your view (you do tend to use the term 'lexical item' rather than 'word' in your papers and books—1987, 425–8; 1990; 1999a, b), and reflect on their relation to the conventional notion of wordhood? Actually, let me note that John Taylor, who is also a cognitivist, uses the term 'word' in Chapter 9 of his voluminous textbook on cognitive grammar published in 2002 and elsewhere (talking about the taxonomy of symbolic units), and you cannot find the term 'expression' in the index of that book.

LANGACKER: Well, Taylor was doing what he was doing for purposes of writing a textbook, and I think he was probably following the traditional textbook practice of talking about words in a rather informal way. Let me not address that seriously; I think that was done for practical reasons.

First, a preliminary terminological point. I use the term 'unit' in a technical sense, as something which has become an established cognitive routine. So technically speaking, a novel expression cannot be a unit, nor can we talk of "units of performance".

Now, the word 'word' is very much abused by linguists in writing textbooks and elsewhere. It's very common in textbooks of English to talk about lexical items as words. You can get away with that in English, because so many lexical items are pretty much coextensive with words, we don't have a highly inflected morphology, and so on. But in general we need to distinguish a 'lexical item' or 'lexeme' from a 'word'. In polysynthetic languages, or any language with a lot of complex morphology, a 'word' is usually a 'novel expression' in some way. There is typically a lexical stem plus a number of derivational and inflectional elements, and while each of these is familiar individually the totality is quite often novel. So for me—and I'm being conservative here—a word is the kind of thing you would write with spaces around it in a European language. Or to take the classic Bloomfieldian definition, a word is a minimal free form, and a word boundary a natural place to pause (1933, 177–89). I think a word is a kind of psychological unit, at least in certain kinds of

languages. And for me it's basically a phonological unit. I don't have much by way of a cognitive grammar analysis, so I haven't used it or tried to define it technically. But I do mean to limit 'word' to "words" in the ordinary sense of the term, things you write with spaces (assuming the practice were rationalized a bit). Understood in this way, we cannot talk about a language consisting of words, or people just producing words. You need some other term for what I call 'expressions'. You are right that the term 'expression' is used very broadly here. Besides words, it includes phrases, entire sentences, entire utterances, i.e., any kind of utterance of any size. There is no reason why sequences of sentences could not be called 'expressions', but in practice I use the term only up to the sentence level. And you do need some term: if you want to talk about grammar in a general way, you cannot talk just about words, or about phrases, or about clauses. You need something for raw data of any size, and 'expression' is what I use. It's not really a technical term, so I haven't defined it carefully, but in volume 1 of *Foundations* there is quite a long section about the subtleties of this notion (1987, 425-8). It is not self-explanatory, and what counts as an 'expression' depends on the purpose of one's analysis, how closely you look at the data.

In my view terms like 'lexical item' and 'lexicon' are also much abused, being used in different ways often based on gratuitous assumptions. The only definition that makes sense to me, one that is useful and approximates the traditional understanding of it, is to define a 'lexical item' as a 'fixed expression'. It's not coextensive with 'word', it's not coextensive with expressions that are in some way unpredictable or irregular. For me, then, a 'lexical item' is something you would list in a dictionary as a fixed expression—an expression that people learn as a unit, regardless of its size. In many languages it is typically smaller than a word, but there is no reason not to regard fixed expressions larger than words as lexical items, since there is no natural stopping point. So these terms have different functions, and I try to use all of them in a fairly traditional and consistent sense. A 'word' is basically a phonological unit, 'expression' is a general term for sequences that are produced and need to be analyzed, and 'lexical items' are fixed expressions.

ANDOR: *With this notion of expressions and wordhood as outlined, what do you think of the role and status of dictionaries as linguistic aids for native and non-native speakers of a language? What do they represent? And, in particular, what sort of, what type of information should they represent? Ongoing research in frame-based semantics, which I would*

rather term 'frame-based pragmatics', suggests that dictionaries of the future should be frame-based, they should provide a more thorough and precise representation of world, that is, conceptual, encyclopaedically-based knowledge. Research with a related scope of interest, called WordNet, is carried out in Princeton. By the way, cognitive grammar claims to be an encyclopaedically-based model of representing linguistic conceptualization.

LANGACKER: Your question is largely practical, and I'm not a very practical person. So my answer will be rather limited.

The notion of semantics being encyclopaedic in scope simply means that linguistic expressions, and lexical items in particular, are not vessels full of content. Instead they give us semi-structured ways of accessing conceptual content which is largely there for independent reasons. And there is no principled dividing line between what can be evoked via lexical items and general knowledge. I think this is very important to realize from a theoretical standpoint. The point is crucial if you want to understand language, how it works, how it's represented psychologically, and how it relates to the rest of cognition. But this doesn't translate into descriptive practice of any principled or any practical sort. Taking the point seriously would actually imply that it's impossible to write a dictionary, if you understand a dictionary as characterizing how speakers represent things in their own minds. A real dictionary is necessarily artificial, in the sense that it has to be limited in scope. But this doesn't mean that people shouldn't write dictionaries or grammars for practical purposes. And those practical concerns dictate what should go into them. What thoughts I have on the matter are not based on detailed research or detailed lexicography of either a practical or a theoretical sort. For an optimal dictionary, I think that examples are very important to show how expressions are actually used. Something that is really critical, and typically left out of dictionaries, are indications of the normal ways of phrasing things in the language. I know this from personal experience. I studied various languages in college, and was good at studying them the way they were taught in those days, and in some places still are. That is, I'd learn all the lexical items presented in a course, and mastered everything in the grammar book. But this itself does not guarantee real fluency or the practical ability to use a language effortlessly in everyday conversation. Part of the problem is register, part of it is diglossia, part of it is not being exposed enough to the culture and all the things members of the culture talk about from day to day. There is a vast amount of background knowledge required to bridge the gap

between the way languages are classically taught and what is needed to use them in practice. But one particular factor stands out in my mind as essential. Given that you have learned all the rules in a grammar book, and all the basic vocabulary, you still face the following problem: if you want to say something, there might in principle be dozens, hundreds, or even infinitely many different ways to say it in the language—all equally grammatical using basic vocabulary. But speakers would normally say it in one particular way, out of all these options. The problem, then, is knowing how one normally phrases things in the language. That's a level which tends to be absent in language instruction, because it is not just a matter of grammar or of lexicon in the traditional sense. I cannot suggest a practical solution to the problem, but it does need to be addressed.

ANDOR: *However, talking about constituency, more particularly about the compositionality of expressions, you suggest that "components are neither fixed nor predetermined in their semantic or phonological shape, but are flexibly construed to accommodate adjacent elements and the overall context; hence they may never have exactly the same value on any two occasions" (*Grammar and Conceptualization, *1999b, 152). How can this issue be tackled in discussing the representation of meaning and meaning facets in dictionaries, that is, in sourcebooks of lexical organization and —for the future, when frame-based—of lexical relations?*

LANGACKER: Well, that's a hard question. A first point is that there is indeed something that one can call the linguistic meaning (or meanings) of a lexical item. I emphasize flexibility in saying that what you can access through a lexical item is indefinite in scope, that you can reach into any associated domain of knowledge, and that you adjust and accommodate a lexical item's meaning to surrounding elements. These are not however equivalent to saying that a lexical item has no definite meaning, or that it can mean anything at all. It's not the case that anything goes. You have to avoid two equally wrong positions, and my formulation tries to do that. One position is that the meaning of a lexical item is fixed, determined, and quite limited, that we can figure out what it is, and that it's distinct from general knowledge. This is the classic view of the dictionary metaphor. The representation is generally assumed to be fairly small, roughly the size of actual dictionary entries (although Wierzbicka 1985 sometimes formulates very lengthy—albeit still limited—definitions). It is often conceived as being just a bundle of semantic features.

The other extreme is to say that, all right, since in the right context we can construe a term as meaning almost anything, lexical items don't

have any fixed meanings. Things mean whatever we want them to mean. This, I think, is just obviously wrong. People know that words have meanings and that we stretch them to accommodate new circumstances. This implies that there is something we start from, something we stretch when needed.

So I talk about a lexical item being a structured and partially determined way of accessing encyclopaedic knowledge. A particular lexical item takes certain aspects of its referent (certain cognitive domains) as being central to its characterization, and others more peripheral. If there is no specific cut-off point as to what is potentially accessed through a lexical item, at least there are degrees of centrality, as a particular lexical item sets it up.

Which aspects of general knowledge tend to be evoked in using a lexical item is to some degree conventionalized. There is a gradation perhaps, but access is partially structured instead of random. At various places I give specific examples. My classic case is *roe* vs. *caviar*. If you think about it, we can access the total body of knowledge associated with either lexical item through the other one. People who know what *caviar* is know that it's made out of fish eggs, which is also called *roe*; and people who talk about fish eggs and use the term *roe* know it can be made into *caviar*. Effectively, then, the relevant portion of our encyclopaedic knowledge base is really the same for both. But if you use the term *caviar*, you expect it to more saliently invoke the finished product, the notion of expense and fancy parties, and all that. If you use the term *roe*, you are expected to be talking about fish reproduction, as opposed to what you eat on crackers at fancy parties. It takes some work to contravene those tendencies, as each lexical item accesses the same overall knowledge base from different directions. That's conventional, that's linguistic, that's built into what we can call the linguistic values of these lexical items. It is not a matter of their meanings being encapsulated, but rather of the different kind of access they afford to the shared knowledge base. This constitutes a difference in meaning.

Given that lexical items do have conventional meanings, it is still the case that context determines how in particular they are likely to be construed. This includes the effect of adjacent items that you alluded to in the passage quoted. Now, how to represent that in dictionaries, well, I don't know. Maybe dictionaries could do a better job of making it clear that lexemes give access to domains of independent knowledge, instead of just providing a concise definition. I'm not sure how that could be

done. I think dictionaries are a little bit misleading by trying, in just a couple of lines, to offer a verbal definition which supposedly represents a lexeme's meaning. But a typical definition is not the sort of thing anyone would ever say. Dictionary definitions have a certain style, and they don't clearly indicate that we are accessing structured bodies of knowledge in a certain way.

I have just one other comment on these practical matters (which I have not thought about in any depth). It is simply that people are very adept at making sense of things, of flexibly construing lexical meanings to accommodate adjacent elements and the overall context. They make these adaptations so easily and automatically that they pose few problems in a practical sense. So perhaps dictionary writers don't have to worry much about it.

ANDOR: *The role of 'domains' plays a critical role in your theory, which expresses the view that lexical items rank these domains. You also stress that related senses of lexical items (see p. 4 of the book* Grammar and Conceptualization*) comprise networks being linked by categorizing relationships. Let me quote: "[...] a lexical item evokes a set of cognitive domains as the basis for its meaning, and exhibits considerable flexibility in this regard. The access it affords is anything but random, however. First of all, the domains a lexical item invokes are primarily limited to those in which the entity it designates (i.e., its conceptual referent) figures directly. As part of its conventional value, moreover, a lexical item ranks these domains: it accords them particular degrees of centrality [...]" (Langacker 1999b, 4–5). All this certainly refers to the networks of conceptual structures that provide the sources of a relevantly mapped lexical representation. I mean, to networks such as scenes, frames, and scripts. I would say, lexical items are saliently mapped in and from such structures of cognitive activity. Why don't you use these terms referring to the particular type of conceptual activity rather than the considerably opaque term 'domain'? And why don't you use the notion of lexical-pragmatic 'salience', rather than 'ranking a domain'?*

LANGACKER: 'Domain' is not one of my favorite terms. I needed to invent a lot of terms in formulating cognitive grammar, since there were so many notions that had no names previously, and since I thought a lot of prior terminology was infelicitous. Not every terminological choice I made to meet those needs proved optimal over what is now almost three decades. If I could invent the necessary terminology now, instead of having done so 25 years ago, I would make some other choices. So I don't totally defend

all the terms I use. But there was a reason for using 'domain' instead of terms like 'scene', 'frame', or 'script', namely the need for a general term. 'Script' carries with it the notion of a sequence of actions, and that's too narrow. What I wanted was a general term to talk about meanings, or the conceptual content of meanings (as opposed to construal). 'Domain' allows me to talk about meanings in a general and coherent way, without making totally arbitrary divisions. For instance, we need to describe the source of the conceptual content for, say, a color term, as well as for something based on the restaurant script.

ANDOR: *But how about 'frames'? Isn't that concept better for such purposes? Frames could be understood to be quite general, as opposed to scripts.*

LANGACKER: You could also have included 'idealized cognitive model' (Lakoff 1987). Although Lakoff has said he understands the term ICM very generally, it is still too narrow. 'Frame' does come closest to being an adequate term. If I were doing things from scratch, I might well adopt 'frame'. But it would have to be in a totally general sense. Would Fillmore say that color space is a frame?

ANDOR: *That's exactly the problem, that the term 'frame' has also been extensively very much abused. A lot of people who were talking about scripts and scenes and other kinds of scenarios, actually were thinking of frames rather than these other domains. So it has also been extensively abused, I should say. Which is a major problem. See Fillmore's alternative proposal to checklist theories of meaning (1975), his early steps to outline the theory of frame semantics (1982), and Schank and Abelson's classical work on frames (1977).*

LANGACKER: Right. Fillmore uses 'frames', gives a list of things that he calls frames in his paper on frame semantics, but he didn't obviously cover basic domains—e.g., time, space, color space—which are also crucial to semantics. So that's my reason for using 'domain': the need for a general term. You also asked about 'salience' versus 'ranking'. Those are both very general terms covering certain aspects of construal. I have no principled reason for using the latter instead of the former in regard to domains.

ANDOR: *Actually, for me, the most important aim was to clarify what 'domains' are and so on, using it as a general term, or perhaps, frame could have been a better candidate. That was the issue I intended to raise here.*

LANGACKER: Yes. There was a motivation, primarily the need to subsume basic domains as well as non-basic domains under one term. Fillmore was focusing on only certain kinds of notions as frames, though obviously the term could be generalized.

ANDOR: *I would also like to ask you about active zones, concerning their role in serving as a discourse cohesive or coherence factor. In your work on active zones that I have had a chance to study, starting with your 1984 paper that appeared in the Berkeley Linguistics Society meeting handbook of that year up to fairly recent work, and also in Eve Sweetser's 1999 paper with ample reference to your work, the role of active zones is discussed within the framework of utterances rather than in texts. Perhaps it would be interesting to study their role in discourse organization, particularly as a discourse cohesive facet, and also as a factor in charge of the economical nature of linguistic, particularly of discourse representation. And we should also study their frame-related factors. Would this, in your view, be a feasible research project?*

LANGACKER: I could answer just by saying "yes". But probably you expect something more.

I think the areas you mention are part of using the notion of 'active zone' in the first place. You cannot divorce this from questions of frames or domains, obviously.

ANDOR: *That's exactly why I bring this up, from the point of view of providing some sort of organizing principle, or the kind of thing applicable for discourse interpretation.*

LANGACKER: Yes. I don't think I ever conceived of the notion active zone as applying to utterances or spoken language, as opposed to texts. It was meant to be general, for any kind of language production.

ANDOR: *I brought this up because when you were talking about active zones, you always had the utterance length kinds of structures highlighted.*

LANGACKER: It is certainly true that I characterized active zones with respect to a relational expression and its arguments; I talked about a profiled relationship, and then the things that function as its trajector or landmark. That's the level at which I introduced the term and the purpose for which I introduced it. This ties the notion to a particular relational expression and associated nominals, e.g., a verb and then a clause. Maybe you are raising the question of whether a particular clause with a particular verb in it can be interpreted independently, or whether you sometimes have to look at the whole discourse context in order to

determine the active zones. Another possible question is whether there might be some higher-level phenomenon that you could handle in a way analogous to positing active zones for verbs. Those are two different matters that could be investigated, but I haven't really thought about either one.

ANDOR: *That's exactly the thing. I am also thinking of cases of synonymy. I have done quite extensive research in this issue. Taking verbs of jumping, for instance, why exactly people use a given member of a synonym set in a lexical field under the conditions of a certain context rather than another. Why do we tend to use the prototypical member of a set to overgeneralize, rather than use a specific one? Or, under what conditions do we use a specific one rather than the prototype? So I was thinking of a case where your concept of active zones could be very helpful in this domain, saying that, for instance, in certain types of contexts, you would choose to use a verb such as* vault *rather than* jump. *You would do that on such grounds because of the context, without mentioning some integral elements that go together with the verb, such as* pole, *for instance. I thought that choosing this particular verb rather than another one from a synonym set in some way could be related to active zones, which would provide the kinds of conditions relevant from the point of view of yielding, contributing to discourse coherence. That was my idea.*

LANGACKER: I think that has to be worked out with particular illustrative examples to see concretely how it could be useful at that level. I do think it's worth looking at, it's a reasonable idea. To say more, I'd have to think in terms of specific cases.

ANDOR: *Pursuing the topic of active zones a little bit further, let me ask your opinion about whether I'm right to say that the way you address active zones is closely related to the approach of certain pragmaticians, including Jason Stanley, François Recanati, Kent Bach and others, and, of course John Perry, in analyzing cases of unarticulated constituents, for instance in utterances such as*

(i) Mary took out her key and opened the door.

in which a bridging inference has to be made by the hearer, resulting in with it *or*

(ii) He eats rabbit. (implying 'rabbit meat')

(iii) He wears rabbit. (implying 'rabbit fur'),

demonstrating cases of free enrichment? Actually, the above-mentioned pragmaticians all happen to study the same examples that you analyze related to the issue of active zones, such as

(iv) I finished the book.

(v) John heard the piano.

And others. See, for instance, Recanati (2004). Which analysis by both parties, as I understand, refers to case-studies of the economy of linguistic representation. Is this a correct understanding?

LANGACKER: I wouldn't want to speak for those other analysts, because this is a little bit outside my usual scope of reading. But I think it's a good characterization for my standpoint. Yes, economy of linguistic representation is an important point here. As I tried to argue in talking about some of these examples, if you tried to be fully precise, instead of relying on the active zone phenomenon, you could never say anything. You can always be more precise. Every linguistic expression has to be oversimplified, and leave things out, and make a choice as to what will be explicit, and rely on established scenarios, established frames, etc. for people to fill in the details and make sense of it all. There are conventionalized ways of doing that, as well as free, new ways of doing it. This is all part of one big problem from my standpoint. The term 'active zone', as I said, was invented to cover a fairly narrow phenomenon, but I would never claim that the limitation is anything more than one of convenience, and a matter of what happened to attract my attention first. There is a danger in using the same term for too many things, in which case you need more specialized terms to distinguish subcases that are interesting for their own reasons. So there are different strategies here. Some terms I tend to use fairly narrowly, even though they could in principle be extended quite broadly. 'Reference point' is another one: anything could be a reference point phenomenon, if you want to think about it that way. But there are some things where that aspect is so special and central that it seems best to confine the term to those cases, at least for purposes of exposition. So that's what I tend to do. 'Active zone' is a term of that sort.

ANDOR: *I would like to ask three more questions, time providing. The first concerns your notional approach to 'parts of speech'. You devoted considerable effort to discussing the case of verbs and nouns. I would particularly be interested in your way of thinking about the adjective category, which you consider to be an atemporal relation, that is to say, a*

state, summary scanned (as described on pp. 78–9 of Concept, Image, and Symbol *(1990)). But first, what is your view about the predicative use of adjectives representing cases of the [±stative/dynamic] distinction, such as in*

(vi) John is hard-working.

(vii) John is malicious

(viii) John is being malicious.

and the the classic examples of

(ix) John is careful.

(x) John is being careful (with the vase).

I guess you would say that these examples demonstrate cases of processes.

LANGACKER: Well, you are raising some fairly complex issues here, and there's a lot going on in these examples. So we have to approach them from different angles.

First of all, I believe the characterization I gave is correct when fully explicated. When I say that an adjective profiles an atemporal relation, this doesn't mean that time is not involved. For example, in adjectives like *early* or *late*, time obviously **is** involved. What matters is **how** time is involved. When I describe a verb as profiling a temporal relationship (or 'process'), I mean by that two things. First, the relationship is conceived as evolving or extending through time. And secondly, in accessing it and using the expression as a verb, the relationship is scanned sequentially through time as opposed to being scanned in summary fashion. So a verb is temporal in both these senses: the profiled relation is conceived as extending through time, and at some level of processing we access it by scanning sequentially along that axis.

Time can perfectly well be involved in the first sense, but if we view it in summary fashion, by definition it is atemporal, or better 'non-processual', a term I generally use these days. Time is still involved, just not involved in both ways figuring in the definition of a verb. That is an important initial point of clarification.

Now, one thing we have to take account of is the fact that the examples you gave all contain the verb *be*. They do not use an adjective by itself, they combine it with *be*. So all of these are full clauses, and I would say that in every case what's being profiled is a process.

ANDOR: *In Hungarian you would have iterative suffixation added to the root, and you would be using these words as verbs which have an adjectival*

base. In the Hungarian version of John is being stupid, *for instance, you have the word* buta *(the corresponding adjective for* stupid*), and you have* butáskodik *(is being stupid), with rich morphology added to the root.*

LANGACKER: That's comparable to what you are doing here. In effect, *be* is our English morphology. It's just a separate word sometimes, to some degree.

ANDOR: *Under example (x), however,* John is being careful with the vase, *you could just use* János ügyes a vázával *in Hungarian, which would translate literally as* John careful with the vase. *That is, there would not be any* be *there in Hungarian.*

LANGACKER: Well, I have enough trouble analyzing English without trying to analyze Hungarian, which I don't know. So you are bringing in still more complexities. I would not say that using an adjective to head a clause, thereby construing it as a process, always requires some overt morphological indication. That's certainly not true. An adjectival relationship can also be viewed as extending through time by virtue of being plugged into a particular construction which imposes this construal. It does not have to be done by a separate morphological element, but can just be a matter of constructional meaning. However you are still doing something beyond using the adjective in its basic sense. It just happens that in English we have a particular way of doing this in a construction which involves adding another verb.

So we have to strip away the contribution of *be* or that higher-level construction and talk about the meaning of the adjective itself. Of course, that's not really feasible here totally, either. Let's look at (viii) *John is being malicious* and (x) *John is being careful.* Those are, I think, the same phenomenon, as opposed to *John is malicious*, and *John is careful.* Here again, we are starting with *be malicious* or *be careful.* But in (viii) and (x) these are not being used alone. There is a higher level of organization involved, and there are different ways of talking about it. What I want to say about (viii) and (x) is that in each case the *be + adjective* combination is not being construed as an imperfective verb but as a perfective verb. They profile bounded events. The overall event of *be malicious* is bounded, and *be careful* is bounded. They are thus perfective processes. We can say that this happens through a zero derivational process, or we can talk about them as representing a special, higher-level construction, making it an aspect of constructional meaning. I don't have any favorite way of talking about it at present. But the point is, if *be careful* or *be malicious* in its basic sense describes a person having a certain prop-

erty that extends indefinitely through time, in (viii) and (x) we have a use designating an event, an occurrence, a manifestation of this property through some bounded span of time. The sentences could be translated as something like *act malicious* or *act careful* (although *act* is a bit too strong). And because the complex predicate is construed as perfective, it takes the progressive (which in English is limited to perfectives), which has to be used for present time. There is thus a difference between just ascribing or describing a property versus describing a manifestation of a property in one bounded occurrence. That is what these particular examples hinge on. I suppose Laura Michaelis would talk about this in terms of 'coercion' by a higher-level construction, and I'm happy with that, too. That's one way that I could approach the phenomenon. So you see, there are various dimensions to your question. We have covered several already. Did you have something with example (vi), *John is hard-working*, other than what we've already discussed?

ANDOR: *Well...*

LANGACKER: Now, there is something very deep and important here that I don't yet have a good grasp of. That is this notion of a 'property'. First of all, any adjectival property, when it's actually manifested, is manifested through time, either a point in time or a time span of indefinite extent. One way or another, time is involved in ascertaining or observing an adjectival property. The temporal aspect is more salient in some cases, e.g., in *John is hard-working*, as opposed to *John is tall.* Just by glancing at a photograph we can see that John is tall. But for *John is hard-working*, you have to observe him on various occasions for extended periods. However, the two adjectives are parallel linguistically, in that both of them designate the situation of that property being characteristic of the person, as either a locally or globally valid ascription. That's different from the actual manifestation of the property, or the observation and verification of it. You have to sort all these things out. What I think is a rather deep and important problem, one I haven't worked out to my own satisfaction yet, is to specify what happens conceptually in converting these various observations into the ascription of a constant property.

ANDOR: *Which is very exciting.*

LANGACKER: Yes. And it's not just adjectives. The same holds for mental state predicates. For example, when I say that *John believes that* X, probably at the moment I utter the sentence John isn't even thinking about X. There are probably very few occasions in his life when he

thinks about X, but he can still believe that X. So, having this belief is a kind of stable property of John, or at least it's something constant. But it's only occasionally manifested. So we have this difference between the manifestation of something and the stable aspect of having it, whether it's a belief or a property like *tall*, *hard-working*, or whatever. Exactly how to think about the conceptual step in going to that level is something I'm not sure about yet. But clearly we do it, and it's manifested linguistically in the difference between perfective and imperfective expressions. The resulting expressions (e.g., *John is hard-working*) are imperfective in form, because we are talking about something that's stable and fixed. But what exactly is it that we are talking about? I know there are classic philosophical problems involved in this. I won't address it from that direction, but I'd like to address it from a conceptual direction in more detail than I have in the past.

ANDOR: *Studying the semantic value of possessive elements and possessive constructions seems to be one of your favorite topics of investigation. The most recent paper I read on this issue was a conference lecture given as a plenary talk in Braga in 2003, published in 2004, in which, I believe correctly, you expressed an anti-localistic view (Langacker 2004, 111–2), opposing the views of case grammarians such as John Anderson (1971). Here, I would like to inquire about your view concerning the pragmatics of possessives in structures where the Saxon genitive or a possessive pronoun is used. Let me take just three examples:*

(xi) John's dinner was very tasty.

(xii) Their knives were very sharp.

(xiii) Their film was very interesting.

All three demonstrate the same issue: the possessor can be understood either as an Experiencer (perhaps even as a Locus, à la Anderson and the localists), or as an active controller of an act of production, i.e., an Agent. When asked to associate, informants show a significant difference in making judgements about the role. How would you interpret, describe this difference in interpretability in your own framework? Certainly, referring to some sort of an attenuation of the active controller role would not work in such cases. The case is interesting, as we would be facing exactly the same issue if the sentences were translated into Hungarian, for instance.

LANGACKER: The problem I face here is how to answer that question without delivering the entire paper. First of all, I think any of these

sentences could be interpreted in lots of different ways, or any of the nominals can certainly be interpreted in lots of different ways. So there is nothing fixed about their interpretations. What you are alluding to here are their default interpretations.

ANDOR: *For instance, whether John prepared the dinner, or perhaps he ate it.*

LANGACKER: Right. You'd think of those interpretations, or maybe one in particular, rather than dozens of other possibilities, e.g., that *John's dinner* is the one he is responsible for delivering or poisoning. Those wouldn't come to mind.

ANDOR: *But still, when people are asked to associate, you know, one rather than another type of association for a certain kind of context or frame would pop out as most typical and perhaps most salient. I wonder why that is. From among a number of chances available to them, people still stick to certain sorts of things, they spontaneously recognize some sort of saliency. Like in most cases, for instance, in the utterance* Their knives were very sharp, *I believe they would typically think of the producers.* Their dinner was very tasty *for somebody who ate it or had it, or something like that, rather than referring to somebody who prepared it. But it's a matter of interpretation within a domain or a frame.*

LANGACKER: Right. All these invoke some frame, at least implicitly, for their interpretation. You can bias it with the following adjective. But even without the adjective, there are factors like familiar scenarios, standard uses, and the frequency of occasions of talking about particular kinds of things. These result in different degrees of salience for various interpretations.

ANDOR: *Let's take one more of these examples, for instance,* Their holidays were excellent, *thinking of whether they are travel agents or perhaps clients of them.*

LANGACKER: Sure. Any plausible scenario you can come up affords a viable interpretation, but for some interpretations it takes a lot more work to construct an appropriate context. The kinds of factors mentioned bias things in certain direction. Now, from my standpoint that's interesting and very true. But it wasn't what I was talking about.

ANDOR: *I know.*

LANGACKER: The question I was addressing was: What can you say about the meaning of this Saxon genitive construction in general? You don't want to list all the individual kinds of relationships there can be

between possessor and possessed, and say that that's all there is to it. This won't work, since there is no end to the possible relationships that might be involved, if you are talking about things at the level of eating something, making something, etc.

At the other extreme, you can say that there is no semantic value at all that the possessive construction or the possessive morpheme has; because it's so varied, there is just no content that all uses share. And if you're strict about the word 'content', maybe I would agree with that, but I wouldn't agree that there is no shared meaning at all. Possessives are not semantically vacuous. I think the possessive construction (and/or the possessor morpheme) has a schematic meaning as well as prototypical values. But the prototype could conceivably vary from noun to noun. Obviously, only some things are likely to be owned, so ownership is only relevant with certain kinds of nouns. There are only certain kinds of things we make, and so forth. But what I try to show is that the reference point model naturally accounts for the schematic level of characterization.

Secondly, I try to show that the reference point relationship—mentally accessing the target through the reference point—represents the subjective construal of all of the objective kinds of relationships that are typical of possessive constructions, including actively controlling something, or owning something, holding something, etc. Conceptually, those relations (controlling something, holding something, making something, seeing something, having exclusive access to something, etc.) are directional and asymmetrical. Conceptualizing them involves mentally accessing the possessor and the possessed successively, in that order. This sequence is inherent in conceiving of X controlling Y, in any of those varied ways. I assume that one crucial aspect of this conception is tracing a mental path from X to Y: evoking X and then using that as a basis for evoking X interacting with Y. Schematically, that's all possession amounts to: first evoking the possessor, which makes it possible to then evoke the possessed. This subjectively construed relationship is the schematic value of the reference point relation, and that's what all possessives have in common. The reason certain orders are natural, so that we generally can't reverse things and say, for instance, *the dinner's John*, is precisely that specific instantiations imply a certain directionality just to apprehend them in the normal way.

ANDOR: *My final question concerns the issue of linguistic modularity, that of the human language faculty. Do you share the modular view of language as outlined by Fodor (1983), that is, a view according to which*

there exists a language module which is encapsulated, its output representation is shallow, and which does not communicate freely with other modules or the central systemic units of processing? Or, perhaps, would you sympathize with Jackendoff's model of representational modularity, which outlines a number of interfacing sub-modules of the linguistic system (2002)? Once, on p. 13 of Vol. 1 of your groundbreaking work (1987), you expressed the view that knowledge about language is not advanced or mature enough to be able to tackle such issues. Do you still hold the same view at the current level of the state of the art?

LANGACKER: I am uncomfortable with any modular view of language. One reason this is tricky is that it's clear that the brain is not just a homogeneous bank of neurons. I mean, the brain is organized in a modular fashion in many respects. There are columns of neurons that do particular things, areas of the brain that do particular things in coordinated ways, and so forth. There is certainly modularity in how cognition works at the brain level. And if you look at any particular linguistic phenomenon, like a clause or just a noun phrase, you can talk about different features of it as independent problems of analysis. You can talk about the problem of grounding, or of conceiving a physical object, or the problem of categorization. Those are separate problems, and there can be many such problems separable to some degree as issues. Linguists have a tendency—if you question modularity—to cite cases like these as showing the need for a modular view. There are however different things that might be called modularity. The question is whether these include the particular things that linguistic theorists like Fodor and Jackendoff have been dedicated to. Is the language as a whole a module? Or particular subcomponents of a language, like lexicon, syntax, or morphology? I think not, although I would not presume to have convincing arguments that would sway the opinion of a modularist. This is a vast question, and not one I feel qualified to focus on personally in my own work. I think I'm pretty clear about the matter, if I wasn't in 1987. I think those particular kinds of modules are gratuitous from the linguistic standpoint. I don't believe, for example, in any distinction between the lexicon, as people call it, and the syntax. I think it's an erroneous distinction based solely on tradition. That's the clearest case. But the same holds for the language as a whole. Certainly there are kinds of knowledge I consider to be linguistic. But typically these result from drawing together and exploiting independently existing phenomena. They are packaged in a certain way, so the resulting package is specifically linguistic. But lin-

guistic units are not independent of the rest. Encyclopaedic semantics is an obvious and simple example. It just doesn't make any sense to try and separate what's linguistic and what's non-linguistic from the meaning of a lexical item, for reasons argued in other places.

Here's the way I like to think about such matters. It concerns both modularity and the question of innateness, which, of course, is closely tied up with it. We can start with this basic question: Is there an innate language capacity, or an innate universal grammar? At one level the answer is obviously "yes". We have inborn bases for learning languages, we have a compulsion to learn languages when we are children—that's all wired in. The next question is: Are these specifically linguistic? Or is it all done on the basis of more general abilities? That leads to the issue of whether there is a language module, which is a different question. There is a universal basis for learning language, but certainly all kinds of other knowledge and abilities have to be in place and contribute to learning a language. These include pragmatic factors: being able to know that people have intentions when they are speaking, and to apprehend those intentions. These skills are typically ignored by Chomskyans when they argue for the impossibility of learning languages. Obviously, language learning cannot occur by itself; it requires a certain foundation. But given this foundation, I believe it is all describable in terms of semantic structures, phonological structures, and symbolic links between them. There's nothing special like a syntactic component with irreducible syntactic primitives, etc. I am willing to believe that something specifically linguistic is involved, not just general knowledge. I'm pretty sure that we don't learn languages just on the basis of general abilities. I think we have a specific language learning capacity, which partially shapes linguistic structure. But what is it that's specifically linguistic? I don't believe there's any particular content that's specifically linguistic. The analogy I like to draw is with the physical organs of speech. We produce speech with the lungs, the trachea, the vocal chords, the mouth, the nose, the lips, the tongue, the teeth, and so forth. But these organs of speech are all there for other reasons, independently of speech. In the evolution of language they have been adapted, adjusted, and fine-tuned. These adaptations are obviously innately specified—we're born with the vocal apparatus in a certain configuration that chimpanzees don't have. Still, nothing is physically involved that isn't more broadly grounded and doesn't have other uses in the human organism. It is only the particular detailed configuration this apparatus assumes, reflecting the particular

adjustments that have occurred, which make it all work together to give us articulate speech. These are innately specified, and specifically for linguistic purposes. And for the rest of language, I'd like to think of it as being analogous. Conceptualization, semantics, symbolization, and from these grammar — they all rely on things which are independently there and have other functions. But we do much more with them than we could if it were not for innate specifications. It's a matter of tweaking the system, so to speak. And those tweaks are the specifically linguistic innate specifications. Language is not modular in that sense. This is a non-modular view of linguistic uniqueness.

ANDOR: *We, who have followed the development of your cognitive grammar paradigm with great attention on a regular basis, all know the starting point, the initial motivations for it. All of us would now be greatly interested in your plans to develop or extend your theory, and we would like to know what are the topical issues of your research interest for the immediate or the more distant future.*

LANGACKER: I'd like to know that, too. It's a hard question, since there are major problems that need a lot of work. These include things I've reflected on in recent work and have to be investigated at a deeper and more extensive level. One is the need for a cognitive lexicography along the lines of the constructs suggested in cognitive grammar. I am thinking of a program analogous to what Wierzbicka does with her natural semantic metalanguage (1996). I cannot imagine personally undertaking anything on a scale comparable to hers, examining so many lexical items across so many languages. I would however like to work out representative areas of the lexicon in comparable semantic detail, specifically from the cognitive grammar perspective. Since I'm now formally retired, there may be time to have fun with this in coming years. It's important to see just what is involved.

Two themes have come up a lot in recent work. One is "fictivity" (or "virtuality"), e.g., the fictive motion that Talmy (1996) and others have written about. Fictivity is so extensive that I'm not convinced we ever talk directly about actuality. Perhaps we always talk about fictive entities, relating them to actuality only secondarily. But whether that's true or not, fictivity is a certainly major theme which I've written about a lot. I suspect we are only beginning to understand its pervasiveness in language.

Next is "dynamicity", a term that alludes to the time course of any conceptualization. It extends naturally to the time course of conceiving

the form and meaning of a complex expression, like a clause or a sentence. And that shades into questions of grammatical processing — the time course of it, what's going on semantically at each stage, etc. Obviously it also ties into discourse, which I am gradually becoming more involved with. Eventually there needs to be a unified view of semantics, grammar, processing, and discourse. While I have ideas along these lines, they are far from being well-developed or ready to present in detail.

Those are some big themes in the back of my mind. They are all very closely related. In choosing topics, I generally work on what I have to at a certain period in order to get a paper ready for a conference or a volume. In a sense these practical matters drive the agenda. But the topics are all related and mutually informing, they push in the same general direction. I think it has worked out pretty well and will continue to in the future. In any case, the topics I mentioned should be quite important.

One concern is to make it clear how all of the specifics of the model and this way of viewing grammar actually follow from an initial focus on the social-interactive context of speech. It is actually fairly clear in my work, if you really look at it. For instance, I talk about usage events as the basis for all linguistic units, I talk about things like grounding, which is where the speaker–hearer interaction meets grammar. All the way through I have ways of accommodating the social side of things, the cultural side of things, the interactive side of things, the discourse side of things. But this has always been looked at in piecemeal fashion. I am often accused of talking about pure conception and not focusing on these issues. But if you look at the framework and what I actually have talked about, that's not really accurate.

One thing I'm gradually working around to, and hope to do seriously at some point, is to articulate the framework in a way that starts with the social–interactive and the contextual–cultural basis of language, showing how the rest all emerges from it, instead of going in the other direction. This may be more a matter of presentation than of different substance, but I think it's important to work it out along those lines.

Those are some major issues that I'll be thinking about in the future.

ANDOR: *And we might be expecting some more of those big volumes in the future.*

LANGACKER: Big ones, small ones, or articles, I don't know. But certainly I'll keep writing for a while.

ANDOR: *You are a very happy man, I should say, having these kinds of ambitions which, I think, is great for somebody who is working as seriously as you do on these issues.*

LANGACKER: Well, I think I'm actually just getting started, in terms of figuring out these problems.

ANDOR: *But this is exactly the fantastic thing about it. So, Ron, thank you very much for giving me this interview. It certainly has significantly enriched my understanding of your theory and I do very much hope that it will influence its readers in the same way.*

LANGACKER: Thank you for taking the time, as well as for the interest and all the preparation.

References

Anderson, John 1971. The grammar of case: Towards a localistic theory. Cambridge University Press, Cambridge.

Bloomfield, Leonard 1933. Language. The University of Chicago Press, Chicago.

Croft, William 2001. Radical construction grammar. Oxford University Press, Oxford.

Fillmore, Charles 1975. An alternative to checklist theories of meaning. In: C. Cogen (ed.): Proceedings of the First Annual Meeting of the Berkeley Linguistic Society, 123–31. BLS, Berkeley, CA.

Fillmore, Charles 1982. Frame semantics. In: I-S. Yang (ed.): Linguistics in the morning calm, 111–37. The Linguistic Society of Korea, Hanshin.

Fodor, Jerry A. 1983. The modularity of mind. An essay on faculty psychology. MIT Press, Cambridge MA.

Goldberg, Adele 1995. Constructions. A construction grammar approach to argument structure. The University of Chicago Press, Chicago.

Jackendoff, Ray 2002. Foundations of language: Brain, meaning, grammar, evolution. Oxford University Press, Oxford.

Janssen, Theodorus A.–Gisela Redeker (eds) 1999. Cognitive lingusitics: Foundations, scope, and methodology. Mouton de Gruyter, Berlin & New York.

Lakoff, George 1987. Women, fire, and dangerous things. The University of Chicago Press, Chicago.

Langacker, Ronald W. 1984. Active zones. In: C. Brugman–M. Macaulay (eds): Proceedings of the Tenth Annual Meeting of the Berkeley Linguistics Society, 172–188. BLS, Berkeley CA.

Langacker, Ronald W. 1987. Foundations of cognitive grammar. Theoretical prerequisites. Vol. 1. Stanford University Press, Stanford.

Langacker, Ronald W. 1990. Concept, image, and symbol. The cognitive basis of grammar. Mouton de Gruyter, Berlin.

Langacker, Ronald W. 1999a. Assessing the cognitive linguistic enterprise. In: Janssen – Redeker (1999, 13–59).

Langacker, Ronald W. 1999b. Grammar and conceptualization. Mouton de Gruyter, Berlin.

Langacker, Ronald W. 2003. Construction grammars: Cognitive, radical, and less so. ICLC Congress, Logroño.

Langacker, Ronald W. 2004. Possession, location, and existence. In: A. Soares da Silva – A. Torres – M. Gonçalves (eds): Linguagem, cultura e cogniçao, Vol. 1, 85–120. Almedina, Coimbra.

Recanati, François 2004. Literal meaning. Cambridge University Press, Cambridge.

Schank, Robert – Robert Abelson 1977. Scripts, plans, goals, and understanding. Lawrence Erlbaum, Hillsdale, NJ.

Sweetser, Eve 1999. Compositionality and blending: Semantic composition in a cognitively realistic framework. In: Janssen – Redeker (1999, 129–162).

Talmy, Leonard 1996. Fictive motion in language and "ception". In: Paul Bloom – Mary A. Peterson – Lynn Nadel – Merrill F. Garrett (eds): Language and space, 211–276. MIT Press, Cambridge MA.

Taylor, John 2002. Cognitive grammar. Oxford University Press, Oxford.

Wierzbicka, Anna 1985. Different cultures, different languages, different speech acts. In: Journal of Pragmatics 9 : 145–78.

Wierzbicka, Anna 1996. Semantics: Primes and universals. Oxford University Press, Oxford.

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SPEECH REPORT CONSTRUCTIONS IN RUSSIAN*

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Abstract

This study is concerned with the strategies for reporting speech in contemporary Russian. It analyses the salient features of direct and indirect speech report constructions and examines the shifts that accompany the transformation of a direct speech report construction into its corresponding indirect construction. It demonstrates that while most speech report constructions in Russian are multiclausal, monoclausal constructions using evidentials are also possible and that a speech report continuum exists where some constructions display features of both direct and indirect speech reports.

1. Typological profile

Russian is an Indo-European language that belongs to the Eastern branch of Slavic (along with Belorussian and Ukrainian). All three languages use the Cyrillic alphabet with variations for each language. Much of the abstract vocabulary of Russian and some grammatical forms are derived from Church Slavonic, a South Slavic language that was first codified in the ninth century. Russian has a highly developed system of inflectional morphology. There are six cases in the nominal morphology, with vestiges of a seventh (the vocative), and two aspects (imperfective and perfective) and three tenses in the verbal morphology. There are no definite or indefinite determiners. Word-formation makes use of a complex array of affixes, especially suffixes. In terms of the typology of the Slavic languages Russian may be considered to be peripheral, like Bulgarian and Czech, showing significant features not shared by any other Slavic language (for example, absence of a high-frequency lexeme corresponding to 'to have' in English). Syntactic constructions in Russian generally show dependency marking. It has AVO/SV constituent order, though in direct speech

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report constructions, where the complement comes before the reporting verb, partially or fully, the order in the clause containing the reporting verb is VS. (See (5) and (6) below.) Order is relatively free in comparison to English. Compare the following sentences:[1]

(1) (a) Анна любит Бориса.
Ann-a_{A} ljub-$it_{PRED.TRANS}$ Boris-a_{O}
Anna-nom love-3sg.pres Boris-acc
'Anna loves Boris.'

(b) Бориса любит Анна.
Boris-a_{O} ljub-$it_{PRED.TRANS}$ Ann-a_{A}
Boris-acc love-3sg.pres Anna-nom
'It's Boris Anna loves.'

Russian has complement clauses of different types: some contain a complementiser and finite verb form, others just an infinitive as predicate. In some cases both types are possible. See (13a–b) below. By comparison with English, Russian has a diverse set of complementisers. In Russian different complementisers can serve to draw semantic distinctions that in English are conveyed by using different verbs or different constructions. Compare the two following sentences: only the complementisers are distinct (*kak* versus *čto*).

(2) (a) Мать не заметила как сын ушел. (Švedova 1970, 704)
mat'$_{A}$ ne$_{NEG}$ zameti-la$_{PRED.TRANS}$ kak syn$_{S}$
mother-sg.nom.fem not notice-sg.fem.past how son-sg.nom.masc
uše-l$_{PRED.INTR}$
leave-sg.masc.past
'The mother didn't notice her son leave.'

(b) Мать не заметила, что сын ушел.
mat'$_{A}$ ne$_{NEG}$ zameti-la$_{PRED.TRANS}$ čto syn$_{S}$
mother-sg.nom.fem not notice-sg.fem.past that son-sg.nom.masc
uše-l$_{PRED.INTR}$
leave-sg.masc.past
'The mother didn't notice that her son had left.'

[1] Abbreviations: A: transitive subject; acc: accusative; ADV: adverb; CC: copula complement; comp: comparative; COP: copula; CS: copula subject; dat: dative; fem: feminine; fut: future; gen: genitive; imp: imperative; inf: infinitive; instr: instrumental; INTR: intransitive; loc: locative; masc: masculine; NEG: negative; neut: neuter; nom: nominative; O: transitive object; OBJ: object; PARENTH: parenthetic; PERI: peripheral; PRED: predicate; pres: present; S: intransitive subject; subj: subjunctive; TRANS: transitive; V: verb.

2. Speech report constructions

2.1. Introduction

Like English and many other languages, Russian draws a formal distinction between direct and indirect speech reports. Direct speech is termed *prjamaja reč'* indirect speech *kosvennaja reč'*. (The adjective *prjamoj* also translates as 'straight', 'right': *prjamoj ugol* 'right angle', *prjamaja linija* 'straight line'; *kosvennyj* translates as 'oblique': *kosvennyj padež* 'oblique case'.) The typical indirect speech report construction that corresponds to a simple declarative sentence in the direct speech complement is multiclausal consisting of a reporting verb and a complement clause introduced by the complementiser *čto* ('that'). Unlike English, Russian makes use of other complementisers to express supposition and doubt. At the same time Russian provides evidence of a speech report continuum with some speech report constructions showing features of both direct and indirect speech. Note that in a direct speech report construction in Russian the direct speech complement is usually indicated in the written language by an initial dash, not by quotation marks. (Quotation marks indicate a direct speech report within direct speech.)

2.2. Direct speech report constructions

The typical direct speech report construction in Russian attempts a verbatim report and consists of a direct speech complement and reporting verb. The position of the complement in relation to the reporting verb can vary with implications for constituent order. Consider the following two typical examples of a direct speech report construction.

(3) Иногда она спрашивала меня: — Что вы читаете?
(Gor'kij, Pul'kina et al. 1968, 592)

inogda on-a$_{A}$ spraši̇va-la$_{PRED.TRANS}$ menja$_{O}$ čto$_{O}$ vy$_{A}$
sometimes 3sg.nom.fem ask-sg.fem.past 1sg.acc what-acc 2pl.nom
čita-ete$_{PRED.TRANS}$
read-2pl.pres
'Sometimes she would ask me, "What are you reading?"'

(4) Студент сказал: — Завтра будет экзамен.
student$_{A}$ skaza-l$_{PRED.TRANS}$ zavtra bud-et$_{PRED.INTR}$ ėkzamen$_{S}$
student-sg.nom.masc say-sg.masc.past tomorrow be-3sg.fut exam-sg.nom.masc
'The student said: "There'll be an exam tomorrow."'

In both these examples the direct speech complement follows the reporting verb. If the complement precedes the reporting verb, either in full or in part, then the reporting verb must come before the subject, as in the following examples. This constituent order is characteristic of direct speech reports introduced by the complement.

(5) —Завтра будет экзамен,—сказал студент.
zavtra bud-et$_{\text{PRED.INTR}}$ ėkzamen$_{\text{S}}$ skaza-l$_{\text{PRED.TRANS}}$
tomorrow be-3sg.fut exam-sg.nom.masc say-sg.nom.masc
student$_{\text{A}}$
student-sg.nom.masc
'"There'll be an exam tomorrow," said the student.' or
'"There'll be an exam tomorrow," the student said.'

(6) —Хочу я спросить тебя,—тихонько сказала она,—что ты всё читаешь?
(Gor'kij, Pul'kina et al. 1968, 591)
xoč-u$_{\text{MODAL}}$ ja$_{\text{A}}$ sprosit'$_{\text{INF}}$ tebja$_{\text{O}}$, tixon'ko skaza-la$_{\text{PRED.TRANS}}$
want-1sg.pres 1sg.nom ask-inf 2sg.acc soft-adv say-sg.fem.past
on-a$_{\text{A}}$, čto$_{\text{O}}$ ty$_{\text{A}}$ vse čita-eš'$_{\text{PRED.TRANS}}$
3sg.fem.nom what-acc 2sg.nom all read-2sg.pres
'"I want to ask you," she said softly, "what are you reading all the time?"'

Note that in example (6) an adverb (*tixon'ko*) is interposed between the direct speech report and the reporting verb (not possible in English).

In the direct speech report construction the complement can often be discontinuous, as in (6). In this case the clause containing the reporting verb functions syntactically as a parenthesis. Note that in the direct speech report construction the constituent order in the clause with the reporting verb varies according to its position in relation to the complement. Only if the reporting verb comes before the complement can the reporting verb follow its subject. This contrasts with English. Compare (4) and (5).

A direct speech complement can sometimes be introduced by a non-reporting verb, as in the following example. (Such a sentence cannot be transformed into an indirect speech report construction according to the normal transformation. Another verb must be added.)

(7) Он покачал головой: —Будет еще хуже. (Šestakov 2002, 96)
on$_{\text{S}}$ pokača-l$_{\text{PRED.INTR}}$ golov-oj$_{\text{OBJ}}$ bud-et$_{\text{COP.PRED}}$
3sg.masc.nom shake-sg.masc.past head-sg.fem.instr be-3sg.fut
eščе$_{\text{ADV}}$ xuže$_{\text{CC}}$
even bad.comp
'He shook his head: "It will be even worse."'

2.3. Indirect speech report constructions

The typical indirect speech report construction is multiclausal. A simple declarative statement in a direct speech report corresponds to a complement clause using the complementiser *čto* in the indirect speech report. (The complementiser cannot be omitted except possibly in colloquial Russian.) There is a shift in person deixis, but no shift in tense (in contrast to English). Note that Russian has only three tenses, but the verbal system has a well-defined set of aspects. Compare the following direct and indirect speech report constructions.

(8) Он сказал: —Я скоро уезжаю.
on$_{A}$ skaza-l$_{PRED.TRANS}$ ja$_{S}$ skoro uezža-ju$_{PRED.INTR}$
3sg.nom.masc say-sg.masc.past 1sg.nom soon leave-1sg.pres
'He said: "I'm leaving soon." '

(9) Он сказал, что он скоро уезжает.
on$_{A}$ skaza-l$_{PRED.TRANS}$ čto on$_{S}$ skoro uezža-et$_{PRED.INTR}$
3sg.nom.masc say-sg.masc.past that 3sg.nom.masc soon leave-3sg.pres
'He said that he was leaving soon.'

In both (8) and (9) the verb in the complement clause is in the present tense.

(10) Девушка сказала: —Мы придем в шесть часов.
devušk-a$_{A}$ skaza-la$_{PRED.TRANS}$ my$_{S}$ prid-em$_{PRED.INTR}$
girl-sg.nom.fem say-sg.fem.past 1pl.nom arrive-1pl.fut
[v šest' čas-ov]$_{PERI}$
at six hour-pl.gen
'The girl said: "We'll arrive at six." '

(11) Девушка сказала, что они придут в шесть часов.
devušk-a$_{A}$ skaza-la$_{PRED.TRANS}$ čto on-i$_{S}$ prid-ut$_{PRED.INTR}$
girl-sg.nom.fem say-sg.fem.past that 3pl.nom arrive-3pl.fut
[v šest' čas-ov]$_{PERI}$
at six hour-pl.gen
'The girl said they'd arrive at six.'

There may be a change in modality. An imperative can occur only in a direct speech report construction: in the corresponding indirect speech report construction the complementiser *čtoby* is used or simply an infinitive. Compare the following examples.

(12) Он попросил меня: —Помоги мне решить задачу. (Švedova 1980, 486)
on$_{A}$ poprosi-l$_{PRED.TRANS}$ menja$_{O}$ pomog-i$_{IMP}$ mne$_{OBJ}$ rešit'$_{INF}$
3sg.masc.nom ask-sg.masc.past 1sg.acc help-sg.imp 1sg.dat solve-inf
zadač-u$_{O}$
problem-sg.acc.fem
'He asked me: "Help me solve the problem." '

(13) (a) Он попросил меня, чтобы я помог ему решить задачу. (*Idem.*)
on$_{A}$ poprosi-l$_{PRED.TRANS}$ menja$_{O}$ čtoby ja$_{S}$
3sg.masc.nom ask-sg.masc.past 1sg.acc so that 1sg.nom
pomog$_{PRED.INTR}$ emu$_{OBJ}$ rešit'$_{INF}$ zadač-u$_{O}$
help-sg.masc.past 3sg.dat solve-inf problem-sg.acc.fem
'He asked me to help him solve the problem.'
(Literally: 'He asked me that I should help him solve the problem.')

An indirect speech report construction that is an alternative to (13a), without *čtoby* but using an infinitive, would be as follows.

(13) (b) Он попросил меня помочь ему решить задачу.
on$_{A}$ poprosi-l$_{PRED.TRANS}$ menja$_{O}$ pomoč'$_{INF}$ emu$_{OBJ}$
3sg.masc.nom ask-sg.masc.past 1sg.acc help-inf 3sg.dat
rešit'$_{INF}$ zadač-u$_{O}$
solve-inf problem-sg.acc.fem
'He asked me to help him solve the problem.'

When the direct speech report expresses advice, the corresponding indirect speech report uses the same complementiser *čtoby,* as in the following examples.

(14) Мать посоветовала сыну: —Ты бы отдохнул. (*Idem.*)
mat'$_{S}$ posovetova-la$_{PRED.INTR}$ syn-u$_{OBJ}$ ty$_{S}$
mother-sg.nom.fem advise-sg.fem.past son-sg.dat.masc 2sg.nom
by$_{PARTICLE}$ otdoxnu-l$_{PRED.INTR}$
subj rest-sg.masc.past
'The mother advised her son: "You should have a rest." '

(15) Мать посоветовала сыну, чтобы он отдохнул. (*Idem.*)
mat'$_{S}$ posovetova-la$_{PRED.INTR}$ syn-u$_{OBJ}$ čtoby
mother-sg.nom.fem advise-sg.fem.past son-sg.dat.masc so that
on$_{S}$ otdoxnu-l$_{PRED.INTR}$
3sg.masc.nom rest-sg.masc.past
'The mother advised her son that he should have a rest.'

When the direct speech report expresses a possibility or wish (using the subjunctive/conditional particle *by*), there is no shift in modality and the complementiser *čto* is used in the indirect speech report construction. Note the syntactic similarity between the direct speech report in (14) and (16). Both make use of the particle *by*.

(16) Он сказал: —Я бы помог тебе. (Švedova 1980, 486)
on$_{A}$ skaza-l$_{PRED.TRANS}$ ja$_{S}$ by$_{PARTICLE}$ pomog$_{PRED.INTR}$ tebe$_{OBJ}$
3sg.masc.nom say-sg.masc.past 1sg.nom subj help-sg.masc.past 2sg.dat
'He said: "I could help you."'

(17) Он сказал, что помог бы мне. (*Idem.*)
on$_{A}$ skaza-l$_{PRED.TRANS}$ čto pomog$_{PRED.INTR}$ by$_{PARTICLE}$ mne$_{OBJ}$
3sg.masc.nom say-sg.masc.past that help-sg.masc.past subj 1sg.dat
'He said that he could help me.'

(18) Больной сказал: —Я бы выпил чаю. (*Idem.*)
bol'n-oj$_{A}$ skaza-l$_{PRED.TRANS}$ ja$_{A}$ by$_{PARTICLE}$
patient-sg.nom.masc say-sg.masc.past 1sg.nom subj
vypi-l$_{PRED.TRANS}$ ča-ju$_{O}$
drink-sg.masc.past tea-sg.gen.masc
'The patient said: "I'd like to drink some tea."'

(19) Больной сказал, что выпил бы чаю. (*Idem.*)
bol'n-oj$_{A}$ skaza-l$_{PRED.TRANS}$ čto vypi-l$_{PRED.TRANS}$
patient-sg.nom.masc say-sg.masc.past that drink-sg.masc.past
by$_{PARTICLE}$ ča-ju$_{O}$
subj tea-sg.gen.masc
'The patient said that he'd like to drink some tea.'

From the examples of indirect speech report constructions given above it will be observed that Russian, unlike English, can use various complementisers in the indirect speech report. As well as *čto* and *čtoby,* the complementiser *budto* may be used to express doubt or absence of full confidence in the trustworthiness of the reported statement. In English such doubt is expressed by a particular reporting verb, in Russian by a complementiser. Compare the following sentences.

(20) Она утверждает, что слышала этот шум. (Švedova 1980, 485)
on-a$_{A}$ utveržda-et$_{PRED.TRANS}$ čto slyša-la$_{PRED.TRANS}$
3sg.fem.nom insist-3sg.pres that hear-sg.fem.past
[ėt-ot šum]$_{O}$
this-sg.acc.masc noise-sg.acc.masc
'She insists that she heard this noise.'

(21) Она утверждает, будто слышала этот шум. (*Idem.*)
on-a$_{A}$ utveržda-et$_{PRED.TRANS}$ budto slyša-la$_{PRED.TRANS}$
3sg.fem.nom affirm-3sg.pres as if hear-sg.fem.past
[ėt-ot šum]$_{O}$
this-sg.acc.masc noise-sg.acc.masc
'She claims that she heard this noise.'

(22) Приезжал с фронта фотокорреспондент Ромов, он уверял, будто видел в апреле Васю. (Erenburg, Evgen'eva 1981–1984, I: 121)
priezža-l$_{PRED.INTR}$ [s front-a]$_{PERI}$ [fotokorrespondent
arrive-sg.masc.past from front-sgGEN.masc photojournalist-sg.nom.masc
Romov]$_{S}$ on$_{A}$ uverja-l$_{PRED.TRANS}$ budto
Romov-sg.nom.masc 3sg.masc.nom assure-sg.masc.past as if
videl$_{PRED.TRANS}$ [v aprel-e]$_{PERI}$ Vas-ju$_{O}$
see-sg.masc.past in April-sg.loc.masc Vasja-sg.acc.masc
'The photojournalist Romov arrived from the front. He gave an assurance that he had apparently seen Vasja in April.'

Related to *budto* both in form and meaning are the compound complementisers *budto by, čto budto by, kak budto*, as in the following example.

(23) Нам сказали, как будто все уехали. (Švedova 1970, 703)
nam$_{OBJ}$ skaza-li$_{PRED.TRANS}$ kak budto vse$_{S}$ uexa-li$_{PRED.INTR}$
1pl.dat tell-pl.past as if all-pl.nom leave-pl.past
'We were told that everyone had apparently left.'

The complementiser *jakoby* functions in a similar way to *budto* to express absence of certainty, as in the following sentence. Note the semantic change in the reporting verb.

(24) Говорят, якобы он уехал. (Ožegov 1970, 899)
govor-jat$_{PRED.TRANS}$ jakoby on$_{S}$ uexa-l$_{PRED.INTR}$
say-3pl.pres as if 3sg.masc.nom leave-sg.masc.past
'They claim he has left.'

If the direct speech report contains a question without an interrogative, then the corresponding indirect speech report will use the interrogative particle *li* after the verb (which stands in initial position in the complement clause). Compare English *whether, if.* The rules governing shifts remain the same.

(25) Ученик спросил: —Завтра будет экзамен?
učenik$_{A}$ sprosi-l$_{PRED.TRANS}$ zavtra bud-et$_{PRED.INTR}$
pupil-sg.nom.masc ask-sg.masc.past tomorrow be-3sg.fut
ėkzamen$_{S}$
exam-sg.nom.masc
'The pupil asked: "Will there be an exam tomorrow?"'

(26) Ученик спросил, будет ли завтра экзамен.
učenik$_{A}$ sprosi-l$_{PRED.TRANS}$ bud-et$_{PRED.INTR}$ li zavtra
pupil-sg.nom.masc ask-sg.masc.past be-3sg.fut whether tomorrow
ėkzamen$_{S}$
exam-sg.nom.masc
'The pupil asked whether there would be an exam tomorrow.'

In contrast to English, in Russian the indirect speech report construction must contain a complementiser. On the other hand, the complement clause may omit the subject, if it coincides with the subject of the reporting verb. This cannot occur in English. Consider the following sentences.

(27) Она сказала, что она поговорит с профессором.
on-a$_{A}$ skaza-la$_{PRED.TRANS}$ čto on-a$_{S}$ pogovor-it$_{PRED.INTR}$
3sg.fem.nom say-sg.fem.past that 3sg.fem.nom speak-3sg.fut
[s professor-om]$_{PERI}$
with professor-sg.instr.masc
'She said she'd have a chat with the professor.'

(28) Отец обещал детям, что подарит им эту книгу. (Švedova 1980, 486)
otec$_{A}$ obešča-l$_{PRED.TRANS}$ det-jam$_{OBJ}$ čto
father-sg.nom.masc promise-sg.masc.past children-pl.dat that
podar-it$_{PRED.TRANS}$ im$_{OBJ}$ [et-u knig-u]$_{O}$
give-3sg.fut 3pl.dat this-sg.acc.fem book-sg.acc.fem
'The father promised his children that he'd give them this book.'

In (28) the subject of the complement clause is omitted. See also (21) and (22).

In the indirect speech report construction the complement clause functions similarly to other complement clauses.

2.4. Monoclausal speech report constructions

While the typical speech report construction in Russian is multiclausal, Russian also has monoclausal speech report constructions using the evidentials *-de, deskat', mol.* The items *-de* and *mol* are usually described as particles (*časticy*), *deskat'* as a parenthetical word (*vvodnoe slovo*). They cannot be easily identified, except in terms of etymology, with any other word class (the verb, for example). (Compare English 'they say'.) They have no function except as evidentials. *-de* and *mol* carry no stress, while *deskat'* is often unstressed. They are confined to the vernacular register. These particles emphasize that the statement is reported. (Compare Czech, Estonian, Latvian, Ukrainian. In Czech the evidential is the uninflected form *prý*, while in Ukrainian there are four evidentials, all cognate with Russian *mol: mov, movby, movbyto, movljav.* Of these *mov, movby, movbyto* can also serve as complementisers, similar to *budto* in Russian.)

(29) Тарас Петрович Середа часто притворялся, что его не волнует мнение старших начальников: он, дескать, солдат и воюет не ради похвал. (Kazakevič, Evgen'eva 1970–1971, I: 281)

[Taras Petrovič Sereda]$_S$ často
Taras-nom.masc Petrovič-nom.masc Sereda-nom.masc often
pritvorja-l-sja$_{PRED.INTR}$ čto ego$_O$ ne$_{NEG}$ volnu-et$_{PRED.TR}$
pretend-sg.masc.past that 3sg.masc.acc not worry-3sg.pres
[mneni-e starš-ix načal'nik-ov]$_A$
opinion-sg.nom.neut senior-pl.gen.masc chief-pl.gen.masc
on$_C$ deskat' $\emptyset_{COP.PRED}$ soldat$_{CC}$ i
3sg.masc.nom reportedly be-pres soldier-sg.nom.masc and
voju-et$_{PRED.INTR}$ ne$_{NEG}$ [radi poxval]$_{PERI}$
fight-3sg.pres not sake praise-pl.gen.fem
'Taras Petrovič Sereda often pretended that he was not worried by the opinion of his superiors: he was a soldier, he said, and did not fight for the sake of praise.'

These evidentials can also be used within multiclausal indirect speech report constructions as a way of stressing the reported statement.

(30) Раз — под самый под Троицын день — к ней пришли и сказали, что князь, мол, убит на дуэли. (Aluxtin, Evgen'eva 1981–1984, II: 289)

[raz pod sam-yj pod Troicyn den']$_{PERI}$
once towards very-sg.acc.masc towards Trinity-sg.acc.masc day-sg.acc.masc
[k nej]$_{PERI}$ prišl-i$_{PRED.INTR}$ i skazali$_{PRED.TR}$ čto knjaz'$_{CS}$
to 3sg.fem.dat come-3pl.past and say-3pl.past that prince-sg.nom.masc

mol$_{\text{PARTICLE}}$, $\emptyset_{\text{COP.PRED}}$ ubit$_{\text{CC}}$ [na duel-i]$_{\text{PERI}}$
reportedly be-pres killed-sg.masc in duel-sg.loc.fem
'One day—on the eve, the very eve of Trinity—they came to her and said that the prince had been killed, it was said, in a duel.'

Evidentials may be used to indicate a direct speech report, as in the following passage. Note the use of different evidentials in successive sentences.

(31) — Позновил по телефону из бюро пропусков. Так, мол, и так, с вами говорит Кротов. Мне, дескать, необходимо с вами срочно поговорить об Елизавете Ивановне. (Lin'kov, Evgen'eva 1970–1971, I: 281)
pozvoni-l$_{\text{PRED.INTR}}$[po telefon-u]$_{\text{PERI}}$ [iz bjuro
call-sg.masc.past by phone-sg.dat.masc from office-sg.gen.neut
propusk-ov]$_{\text{PERI}}$ tak$_{\text{ADV}}$ mol$_{\text{PARTICLE}}$ i tak$_{\text{ADV}}$[s vami]$_{\text{PERI}}$
permit-pl.gen.gen so reportedly and so with 2pl.instr
govor-it$_{\text{PRED.INTR}}$ Krotov$_{\text{S}}$ mne$_{\text{OBJ}}$ deskat'$_{\text{PARTICLE}}$ $\emptyset_{\text{COP.PRED}}$
speak-3sg.pres Krotov-nom.masc 1sg.dat reportedly be-pres
neobxodimo$_{\text{CC}}$ [s vami]$_{\text{PERI}}$ sročno$_{\text{ADV}}$ pogovorit'$_{\text{INF}}$
necessary-sg.neut with 2pl.instr urgently speak-inf
[ob Elizavet-e Ivanovn-e]$_{\text{PERI}}$
about Elizaveta-sg.loc.fem Ivanovna-sg.loc.fem
'He called on the phone from the office of permits. Like this, he says, it's like this, it's Krotov speaking to you. I need, he says, to have an urgent chat with you about Elizaveta Ivanovna.'

The particle *-de* functions as an enclitic (and is usually marked in the written language with a hyphen). It is often attached to the first constituent of the main clause in the speech report. It can be repeated several times in the one speech report, if the report consists of several clauses.

(32) [Ногтев] продолжал говорить: если бы ему дали все необходимое, он-де наладил бы питание. (Ažaev, Evgen'eva 1981–1984, II: 374)
[Nogtev]$_{\text{A}}$ prodolža-l$_{\text{PRED.TRANS}}$ govorit'$_{\text{INF}}$ esli by$_{\text{PARTICLE}}$
Nogtev-nom.masc continue-sg.masc.past speak-inf if subj
emu$_{\text{OBJ}}$ dal-i$_{\text{PRED.TRANS}}$[vs-e neobxodim-oe]$_{\text{O}}$
3sg.masc.dat give-pl.past all-sg.acc.net necessary-sg.acc.neut
on$_{\text{A}}$- de$_{\text{PARTICLE}}$ naladi-l$_{\text{PRED.TRANS}}$ by$_{\text{PARTICLE}}$ pitani-e$_{\text{O}}$
3sg.masc.nom reportedly arrange-sg.masc.past subj food-sg.acc.neut
'[Nogtev] continued speaking: if he were given everything necessary, he said, he would arrange the food.'

3. Reporting verbs and framers

In Russian the set of reporting verbs that can be used with a direct speech complement is extensive and largely coincides with the set that can be used with an indirect speech complement. Reporting verbs of communication taking the complementiser *čto* include *govorit'* 'say', *dokladyvat'* 'report', *zajavljat'* 'announce, declare', *izveščat'* 'inform, notify', *informirovat'* 'inform', *molvit'* 'say', *opoveščat'* 'notify, inform', *osvedomljat'* 'inform', *ob''javljat'* 'declare, announce, proclaim', *pisat'* 'write', *rasskazyvat'* 'tell, narrate, recount', *soobščat'* 'communicate, report, inform, announce', *skazat'* 'say, tell'. But the set of reporting verbs in Russian shows significant semantic differences from the set of reporting verbs in English. For example, *skazat'* corresponds to both 'say' and 'tell', *govorit'* to both 'say' and 'speak', while *sprašivat' sebja,* literally 'ask oneself', translates 'wonder'. At the same time in Russian there are some non-reporting verbs that can frame a direct speech complement that do not readily combine with an indirect speech complement. Consider the following sentences taken from a Russian crime novel of the Soviet period. Each sentence is multiclausal and shows the characteristic inversion of subject and verb after a direct speech complement.

(33) — Вы, значит, пешком решились? — улыбалась Тихомирова, довольная что встретила-таки его. (Šestakov 2002, 64)

vy$_{S}$ značit$_{PARENTH}$, peškom$_{ADV}$ rešil-is'$_{PRED.INTR}$ ulybalas'$_{PRED.INTR}$
2pl.nom so on foot decide-pl.past smile-sg.fem.past
Tixomirova$_{S}$ dovol'n-aja$_{PERI}$ čto vstretil-a$_{PRED.TR}$ taki$_{PARTICLE}$
Tixomirova-sg.nom.fem pleased-sg.nom.fem that meet-sg.fem.past nevertheless
ego$_{O}$
3sg.acc.masc
'"So you decided to walk?" Tixomirova smiled, pleased that she had met him after all.'

This may be described as ellipsis: it occurs in Russian where English retains the reporting verb, as in the following example.

(34) — Это школа наша, — махнула Ирина прутиком на красное здание. (Šestakov *op.cit.*, 65)

ėt-o$_{CS}$ Ø$_{COP.PRED}$ [škol-a naš-a]$_{CC}$ maxnu-la$_{PRED.INTR}$
this-sg.neut.nom be-pres school-sg.fem.nom our-sg.fem.nom wave-sg.fem.past
Irin-a$_{S}$ prutik-om$_{OBJ}$ [na krasn-oe zdani-e]$_{PERI}$
Irina-sg.fem.nom switch-sg.masc.instr at red-sg.neut.acc building-sg.neut.acc
'"This is our school," said Irina, waving a small switch at a red building.'

As well as reporting verbs, verbs of cognition and thinking can also introduce a complement clause with *čto*. The same shifts (or absence of shift, in the case of tense) apply.

4. Speech report continuum

While standard Russian formally distinguishes direct and indirect speech report constructions and characterizes each with certain distinctive features, it is also possible to find speech report constructions that show features of both direct and indirect speech reports. This suggests a speech report continuum. Consider the following sentence (difficult to translate into English without distortion). It has a reporting verb and the complementiser *čto* typical of an indirect speech report, but lacks the usual shifts characteristic of such a report: the complement clause contains imperatives (*postupaj, uezžaj*) and a 2nd person pronominal (*tvoja*) that correlates with a 3rd person pronominal (*emu*) referring to the person addressed by the subject of the reporting verb.

(35) Когда он пришел домой, я ему сказала, что или поступай, или уезжай из дому, а что всякая твоя ночь мне стоит год жизни, ...
(S. Tolstaja, Švedova 1980, II: 487)

kogda on$_{S}$ priše-l$_{PRED.INTR}$ domoj$_{ADV}$ ja$_{A}$ emu$_{OBJ}$
when 3sg.masc.nom come-sg.masc.past home 1sg.nom 3sg.masc.dat
skaza-la$_{PRED.TR}$ čto ili postupaj$_{IMP}$ ili uezžaj$_{IMP}$ [iz dom-u]$_{PERI}$ a
say-sg.fem.past that or act-sg.imp or leave-sg.imp from home-sg.gen.masc and
čto [vsjak-aja tvo-ja noč']$_{A}$ mne$_{OBJ}$
that each-sg.nom.fem your-sg.nom.fem night-sg.nom.fem 1sg.dat
sto-it$_{PRED.TR}$ [god žizn-i]$_{O}$
cost-3sg.pres year-sg.acc.masc life-sg.gen.fem
'When he came home, I said to him that either do something, or leave home, and that each night of yours costs me a year of my life, ...'

5. Indirect speech reports in colloquial Russian

In colloquial Russian (*razgovornaja reč'*) one can observe particular features of indirect speech reports not found in the standard literary language. Colloquial Russian shows a higher degree of freedom of constituent order than the standard language and permits discontinuous

indirect speech reports. Take the following sentences, where the subject of the indirect speech complement is placed before the subject of the reporting verb. Note the presence of the complementiser *čto* after the reporting verb.

(36) Конфеты он сказал что вкусные. (Zemskaja 1973, 398)
konfet-y$_{CS}$ on$_{A}$ skaza-l$_{PRED.TRANS}$ čto Ø$_{COP.PRED}$ vkusn-ye$_{CC}$
sweet-pl.nom 3sg.masc.nom say-sg.masc.past that be-pres tasty-pl.nom
'He said that the sweets were tasty.'
(Standard Russian: Он сказал, что конфеты вкусные.)

(37) Его сестра говорят что приехала. (*Idem.*)
[ego sestr-a]$_{S}$ govor-jat$_{PRED.TRANS}$ čto priexa-la$_{PRED.INTR}$
3sg.masc.gen sister-sg.nom.fem say-3pl.pres that arrive-sg.fem.past
'They say that his sister's arrived.'
(Compare: 'His sister they say that she's arrived.')
(Standard Russian: Говорят, что приехала его сестра.)

6. Speech report constructions and style

In works of literature direct and indirect speech report constructions often reflect significant stylistic differences and allow for contrasting modes of expression. Generally speaking, direct speech reports, being a more faithful representation of what has been said (though not necessarily an exact representation), can contain lexical elements (slang, expletives, colloquialisms, non-standard grammatical forms) not usually found in the stylistically more neutral indirect speech reports. For this reason some Russian writers (Babel', for example) have deliberately cultivated direct speech in their writing as an immediate way of confronting the reader with the reality of what is being portrayed. (Here one may compare the photograph to the drawing or painting, though all can involve a degree of artifice.) If we consider the short story by Babel', entitled *The Death of Dolgušov,* we discover that of the 140 lines of text, 77 lines (or 55%) represent direct speech reports.

7. Conclusion

In conclusion it should be noted that Russian distinguishes both direct and indirect speech report constructions which are typically multiclausal.

Russian also has monoclausal speech report constructions that employ a vernacular evidential (*mol, deskat'* or *-de.*) At the same time it is possible to demonstrate the existence of a speech report continuum in Russian, where some constructions display features of both direct and indirect speech reports, such as the complementiser *čto* and imperative verb forms. While Russian makes use of a large set of reporting verbs in speech report constructions, it can also deploy non-reporting verbs as framers of direct speech complements.

References

Evgen'eva, Anastasija P. (ed.) 1970–1971. Slovar' sinonimov russkogo jazyka v dvux tomax [A dictionary of Russian synonyms in two volumes]. Nauka, Leningrad.

Evgen'eva, Anastasija P. (ed.) 1981–1984. Slovar' russkogo jazyka v četyrex tomax [A dictionary of Russian in four volumes]. Russkij jazyk, Moscow.

Ožegov, Sergej I. 1970. Slovar' russkogo jazyka [A dictionary of Russian]. Sovetskaja enciklopedija, Moscow.

Pul'kina, Il'za M. – Ekaterina B. Zaxarova-Nekrasova 1968. Učebnik russkogo jazyka dlja studentov-inostrancev [A textbook of Russian for foreign students]. Vyssšaja škola, Moscow.

Šestakov, Pavel 2002. Strax vysoty [Fear of heights]. Detektiv-Press, Moscow.

Švedova, Natal'ja Ju. (ed.) 1970. Grammatika sovremennogo russkogo literaturnogo jazyka [Grammar of contemporary literary Russian]. Nauka, Moscow.

Švedova, Natal'ja Ju. (ed.) 1980. Russkaja grammatika. Tom II: Sintaksis [Russian grammar. Volume 2: Syntax]. Nauka, Moscow.

Zemskaja, Elena A. (ed.) 1973. Russkaja razgovornaja reč' [Russian colloquial speech]. Nauka, Moscow.

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THE GRAMMATICALIZATION OF TEMPORAL SUBORDINATING CONJUNCTIONS IN SURGUT OSTYAK

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Abstract

This paper investigates two subordinating conjunctions of the Surgut dialect, one of the Eastern dialects of Ostyak. One of these, *ḳuntə* 'when, if' acquired the function of a conditional conjunction in addition to its ancient function of a temporal question word; a special feature of its grammaticalization is that whereas it occurs clause initially as a question word, in its conditional function it occurs clause finally. The other item investigated, *kŭč*, may have four different functions in this dialect: it can serve as (a) a temporal conjunction expressing contact anteriority, 'as soon as'; (b) a conjunction of concession, 'although'; (c) a paired concessive-disjunctive conjunction, 'whether... or'; and (d) the anterior constituent of various compounds in 'any-' (e.g., 'anyone'). Its origin is debated: it is either a Russian loanword or else an Ob-Ugrian innovation. This paper argues that, in view of the results of research on grammaticalization in general, the former claim can be discarded with a high degree of probability. Finally, the paper investigates the debated issue of whether these items can be regarded as conjunctions proper and concludes that nothing warrants their exclusion from that category.

In addition to an earlier form of subordination involving a non-finite verb form and no conjunction (and one that is consistent with the basic SOV word order), subordinate clauses involving conjunctions and finite verb forms constitute a more recent phenomenon in the various Ostyak dialects.[1] Studies of primary and secondary grammaticalization with respect to conjunctions—i.e., the investigation of what types of lexical items tend to turn into conjunctions and what novel functions the conjunctions already in existence tend to develop, respectively—are both widespread. The subject-matter of the present paper will be two linguistic items that are usually classified as subordinating conjunctions and

[1] It is impossible to tell exactly when subordination involving a conjunction first appeared in the language but certain conclusions can be drawn from early text collections. Looking at Southern Ostyak texts, Csepregi (1996) claims that around the turn of the century (i.e., around 1900) subordination with non-finite verb forms still prevailed but some finite subordinate clauses had already occurred.

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that can definitely be brought into connection with temporal reference but have developed other functions, too, hence the changes involving them mainly belong to the area of secondary grammaticalization. Their semantic characteristics will be reviewed first, followed by a summary of their syntactic properties.[2]

One of these items is *ḳuntə*, having two distinct functions: an interrogative pronoun meaning 'when' as in (1), and a subordinating conjunction meaning 'if' as in (2):

(1) ḳùntə i̯ąḳ̆ₒḳ̆ₒânàm mənḽən?
when home go.prs.2sg
'When do you go home?' (Paasonen–Vértes 2001, 24/6)

(2) os t'enə əntə ă̊wtat ḳuntə, weʌiʌəw tŏ̊rəma pă̊wat.
also thus not cut.prt.pass.3pl if reindeer.Px.pl.1pl sky.lat freeze.prt.pass.3pl
'If we had not driven them inside, they would have got frozen.'
(Csepregi 1998, 62/4)

Which of the two functions is the earlier one is not at issue: the interrogative pronoun goes back to the Proto-Uralic pronominal stem *ku-* ~ *ko-* (Rédei 1986–1988, 191). It can be observed in general that languages often employ interrogative pronouns as conjunctions in order to express subordination (Harris–Campbell 1995, 293–8). Semantic changes that conjunctions tend to undergo, including the development of their additional functions, can be traced back to pragmatic factors: certain conversational implicatures that are frequently associated with sets of clauses linked by the given conjunction get semanticized during language use and become permanent components of its meaning (Hopper–Traugott 1993, 72–7). One of these implications is that of two events occurring in a temporal sequence the earlier event may be a condition for the later event: the conventionalization of the implication is reflected by conditional conjunctions developing from temporal ones.

The derivation of the semantic change of the other conjunction we look at in this paper, *kŭč*, is more problematic. Four different functions

[2] This paper is based on data coming from the following sources: Paasonen–Vértes (2001), Honti (1978a;b), Honti–Rusvai (1977), Csepregi (1998). For the sake of philological accuracy, as well as in order to avoid mistakes that might crop in while the primary data are brought to a consistent format, linguistic data will be cited in terms of the authors' own transcription systems and with the authors' own translations (translated into English).

of that item can be distinguished: contact anteriority, 'as soon as', as in (3); concession, 'although', as in (4); paired concessive-disjunctive use, 'whether... or', as in (5); and particle-like use, 'any-', as in (6):

(3) i̯ą̈ḵ̫o̯ḵ̫o̯ə̂o̯ ɻå̯ŋ̫tā3̂ [ɔ: ɻą̈ŋ̫tā3̂] kǫ̈tš rā̯ŋəpəs, owpì i̯ą̈ttšəγà ɻ̫ènəm
in step.inf as begin.prt.3sg door middle.translat dig.partperf
məγ-woŋ̫kà kǫ̈rγəs.
earth-pit.lat fall.prt.3sg
'As he began to enter, he fell into the earth-pit dug in the middle of the doorway.'
(Paasonen–Vértes 2001, 96/1)

(4) mà kŏʌγə t'å̯pəŋ ʌŏγo̯-å̯ʌəŋʌam ĕntə pŏ̯məʌat, kŏ̯č pi̯rəs
my yet rotten bone-end.Px.pl.1sg not catch.fire.pass.prs.3sg although old
ko wăsəm.
man be.prs.1sg
'My old bones have not yet burnt up, although I am old.' (Honti 1978b, 128/4)

(5) iki, kŏ̯č jisa, kŏ̯č å̯ʌ jisa, ime ŏs ʌiʌəŋkə
old.man whether cry.imp.2sg or not cry.imp.2sg wife.Px2sg again alive.translat
ĕntə jĕʌ.
not become.prs.3sg
'Old man, whether you cry or not, your wife will not come to life.'
(Honti–Rusvai 1977, 225/6)

(6) t'ukim mă̯t, ŏntəʌnə nŏməḵ̫səʌ, t'aḵ̫a kŭ̯č mŭ̯wəʌi wăʌijat, ʌăŋʌəm
so tired in.herself think.prs.3sg well any thing be.imp.3sg step.prs.1sg
panə t'etti jăḵ̫ə.
and thus in
'She was so tired that she said to herself: "Whoever should be in there, I will enter."'
(Csepregi 1998, 74/2)

Some authors (including Munkácsi 1894, 216; Kálmán 1961, 182; Steinitz 1966, 588) trace this item back to the Russian conjunction *хотьı*, dialectal *хошьı* 'albeit, though; whether... or' whose cognates can be found, in addition to Ostyak dialects, also in Vogul. (In an earlier paper, Gert Sauer also subscribes to that view, cf. Sauer 1993, 355.)

However, Csepregi (1996) calls the reader's attention to the problematic nature of that derivation. In the Southern Ostyak texts she studied, two kinds of forms are attested: a conjunction *küš* 'as soon as' (also occurring as an anterior constituent in Kr. Sav.[3] *küšpa* 'if only') on the one

[3] Abbreviations: Kr.: Krasnojarsk dialect, Sav.: Savodnija dialect, Vj.: Vasjugan dialect.

hand, and the paired conjunction *χoš-χoš* 'whether... or' on the other. She does not reject derivation from the Russian conjunction mentioned in the case of either, but she claims that the former must be an earlier borrowing, in view of its subsequent phonological and semantic changes, whereas with respect to the latter she writes: "the paired item *χoš... χoš* is a truncation of the Russian verb *хочешь* 'you want' and as such it is related to the conjunction *küš*, but appears to be a much later borrowing" (Csepregi *op.cit.*, 62). Gert Sauer, too, presents a rather altered view in his recent paper (1999): he says that the item at hand is not a loanword but an internal development going back to an Ob-Ugrian origin. Although the functions of Russian *хотьь* and Ostyak *kŏč* largely overlap, this is due to mere chance in his opinion, given that the Ostyak word—unlike the Russian one—has a temporal meaning, too. The syntactic behaviour (word order) of the Ostyak conjunction, too, differs from that of the Russian word; if it were a case of borrowing, the syntactic pattern of the source language would have to be copied as well. Furthermore, he claims, phonological factors also disprove the Russian origin of the word. He adds, however, that certain occurrences of the given item may be influenced by the Russian conjunction of similar form and meaning (e.g., wherever its word order is of the Russian type), and that in certain dialects one can observe a homonymous but borrowed item as an anterior constituent: Vj. *kös'-kojį* 'anyone'.

As can be seen, then, three kinds of explanations exist with respect to the origin and functions of Ostyak *kŭč*: (a) Russian borrowing (in all roles); (b) multiple/multi-stage borrowing (in view of the differences); and (c) an internal development that occasionally may follow a borrowed syntactic pattern and has a homonymous borrowed counterpart.

In this case, we can rely on the results of general research on grammaticalization,[4] in particular, those concerning grammaticalization continua that are characteristically taken to be unidirectional. Such a continuum is the range of semantic changes of conjunctions (Hopper–Traugott 1993, 178): temporal > conditional (or causal) > concessive. It is definitely to be taken into consideration that, were we to reckon with borrowing from Russian, we would be forced to derive the temporal meaning from the concessive one, contrary to the strong tendency of the direction of semantic change referred to. (Since Russian *хотьь* can be traced

[4] Dér (2002) employs a similar method when she discusses the history of a Hungarian suffix of debated origin and takes a stance on that issue on the basis of general statements of grammaticalization research.

back to the grammaticalization of a participial form of *xomemь* (Vasmer 1958, 268), the idea that the two Ob-Ugrian languages might have borrowed an earlier, temporal meaning, can be excluded.)

Returning to the above grammaticalization continuum, its discrete staging is necessarily arbitrary since it does not allow for transitional phases that are exactly the periods in which the added pragmatic meaning referred to above becomes a component of the meaning of the given conjunction. And in view of the fact that such changes are usually not "supplantive" but additive, and hence the phenomenon of layering also occurs, it is to be expected that intermediate domains of the continuum will be possible to attest, too: that examples can be found to fall between the assumed initial stage, the purely temporal relation as in (7) and the assumed final stage as in (8). The latter example also shows that the conjunction can have a concessive meaning in positions other than clause initially:

(7) kem kŭč ʌ'iwətʌən, ma t'i jŏwətʌəm.
out as go.prs.2sg I behold come.prs.1sg
'As soon as you get out, I will come then.' (Csepregi 1998, 82/3)

(8) nŭŋ tŏm tŏrəm, tŏm iʌəm păləknə kăw, t'u kŭč
you that sky that front side.iness stone that though
powʌe, muγti wičəpə əntə pitəʌ.
blow.prs.3sg.sgobj through never get.prs.3sg
'On the other side of the world, there is a stone. No matter how strongly you blow it, you will never go through it.' (*ibid.*, 64/3)

This latter example may also serve as an instance of the implication involved in concession, as follows (where S_1 and S_2 are clauses): "With a sentence of the form *bár* S_1, *mégis* S_2 'although S_1, nevertheless S_2', the speaker states 'S1 and S_2' and (s)he pragmatically presupposes or believes that 'given S_1, it could not/should not be the case that S_2'" (Bánréti 1983, 10). In the above example, the statement is that the wind blows the stone and cannot go through it; the presupposition is: if it blows the stone (strong enough), it should be able to go through it. Concession, then, is bound up with conditionality, opposition, and causality; in the case of the conjunction at hand, that implication has turned into part of the meaning of an originally purely temporal item.

In the texts we have studied, quite a number of examples involve this conjunction linking clauses that are, beyond temporal relations, in a

semantic relationship with one another that is not quite concession but has something to do with the neighbouring categories of conditionality, opposition, or causality. In these cases, it is context that is more or less responsible for such additional meaning.

(9) kem kŭč ʌ'iwət, kemən pətəγʌem.
out as go.prt.3sg outside dark
'As he goes out (he sees that) it is dark outside.' (Csepregi 1998, 84/7)

Context: "In the house, it is broad daylight. What could have happened, he thinks. Has the sun risen? He leaves the house."

Potential presupposition: If it is light inside, it should be light outside, too.

(10) ăγ$_{\circ}$əs ŏrt kŏč neγ$_{\circ}$rəməγ, ăγ$_{\circ}$əʌət kŏtnə tŏt pit.
Chukchee leader as jump.prt.3sg sledge.pl middle there fall.prt.3sg
'The Chukchee leader jumped, and he fell between the sledges in the middle.'
(Honti 1978b, 135/1)

Context (broader): The leader is bragging; earlier he has proven that he is good at jumping. It is an unexpected consequence that he now nevertheless falls down.

(11) kem kŭč ʌ'iwətʌət, əjmətа wăr pə əntəm.
out as run.prs.3pl something thing in.fact is.not
'As they run out, there's nothing outside.' (Csepregi 1998, 82/3)

Context: "Suddenly some loud noise is heard, the earth begins to tremble all around. [...] The people all run out, but you should not."

Potential presupposition: If there is some noise outside, something must have caused it.

(12) tə$_{\circ}$wwət i̯ùw^{c} kǫ̇tš kənt̬i̯, ⟨tǫwwə ǩù, tə$_{\circ}$wt⟩ tə$_{\circ}$wwət i̯ùw əntèm,
fire wood as search.prs.3sg fire wood is.not
'As he is looking for firewood, firewood there is none.'
(Paasonen–Vértes 2001, 68/2)

The last example, in which there is clear contradiction between the two clauses, minimally differs from the next one, exhibiting a purely concessive relation:

(13) kǫ̇tš wīγəi̯, ⟨i̯ǫwəttìi̯⟩ i̯ǫ̯wttìi̯ əntèm.
as call.prs.3sg come.partimp.3pl is.not
'Even though he calls, there's no one coming.' (Paasonen–Vértes 2001, 22/5)

It could be expected that causal relations should be linked to temporal relations with a higher probability (concession being in general a very

complex logical relation that is normally grammaticalized rather later; Hopper–Traugott 1993, 178), yet in these texts there are only two pairs of clauses (both occurring in the same tale and being almost identical) in which the event expressed in one of them follows from the event expressed in the other, rather than contradicting the other clause or the context:

(14) panə t'u iminə nŏķ rŭwəttaʌnə iki təγəpə kŭč
and the woman.loc up confuse.partimp.Px3sg.loc old.man here as
saŋkkint, to owpi măča katəʌ – t'ukima pərγinam pŏtəγmin
wake.up.prt3sg ? door-post.lat grab.prt3sg such.lat back draw.advpart
jəγ.
become.prt.3sg
'And as the old woman tried to wake him, the old man woke up, he grabbed at the door-post, so much did he withdraw.' (Csepregi 1998, 94/25)
(As the giant woke up, the boy grabbed at the door-post because he was so frightened.)

As can be seen, then, the Surgut dialect data widely reflect not only the initial and final phases of the assumed functional expansion of the conjunction but also its transitional phases. Hence I think that, wherever the temporal, concessive, or transitional conjunction occurs in a preverbal position, it is unjustified to take it to be of a Russian origin; rather, internal development can be assumed and indeed demonstrated. Word order cannot be taken as decisive in the dialect under scrutiny anyway: with few exceptions, concessive *kŭč* also occurs in a preverbal position (cf. (8)), whereas there are examples of clause-initial temporal *kŭč*, too:[5]

(15) kŭč jəmγə ʌejəʌtaγə jəγ – t'ăķa temi ķăntək ķo optət.
as good.translat watch.inf begin.prt.3sg well this Ostyak man hair.pl
'As he looks at it closer: well, it is human hair.' (*ibid.*, 92/22)

Since in the dialect under investigation there is no phonological distinction between anterior constituent-like or paired ('whether... or') and temporal-concessive *kŭč*, we cannot take a stand as to whether this is the result of internal development or *kŭč* follows the Russian pattern in this function—neither possibility can be excluded.

[5] Also, we are cautioned by the fact that word order variability in Ostyak in general and the Surgut dialect in particular is far from clearly understood, hence it is hardly possible to decide whether the cases at hand are those of the Russian pattern being copied or the conjunction raises from its preverbal position due to stress reasons.

While so far the subject-matter of our investigation was the meaning or the semantic extension of the two conjunctions, in what follows, we will turn to their grammatical behaviour. In particular, we will ask if these items can be seen as subordinating conjunctions. Traditionally they are classified as such; but Sauer (1999) and Hartung (1999, 165–70) argue that this classification is the wrong one. Hartung has the following reasons not to take Ostyak clause-linking items to be conjunctions (and to call them junctors instead):

- conjunctions in general introduce clauses, whereas the items at hand do not: many of them go back to particles and continue to function as particles, too; they often occur after the focused word;
- conjunctions in general cannot be suffixed but some of the Ostyak ones can (those that go back to interrogative or deictic pronouns);
- some of them can take postpositions or possessive suffixes, especially those linking items that occur within subordinate constructions, in complement or relative clauses.

She also notes that, in Ostyak, coordination and subordination cannot be clearly told apart: only clauses whose conjunction is of a pronominal origin are undoubtedly subordinate ones. From this, and from the foregoing, it follows that in her view it would be difficult to define unambiguously which linking items qualify as conjunctions, even though on the basis of such a definition setting up the broader category of junctors could be avoided.

With respect to the two items that are investigated in this paper, only the first of the above criteria is applicable since they cannot be suffixed. Indeed, *kŭč* most often is in a position within the clause (immediately before the verb, as in (1), (3), (8), (10), (12); if there is a preverb, then between the preverb and the verb, cf. (7), (9), (11)) where otherwise only particles occur. As a conditional conjunction, *ḳuntə* normally occurs clause finally,[6] whereas the interrogative pronoun from which it developed into a conditional conjunction, just like other interrogative pronouns that are also used as relative pronouns, are clause initial. (In the texts under survey, no instance can be found of *ḳuntə* as a temporal conjunction occurring clause initially.) What it shows parallel word order behaviour with is the synonymous conditional construction involving a particle: the particle *ka* also occurs at the end of its own clause, but whereas the latter

[6] There is a single attested example in which it occurs immediately before the verb.

occurs in a clause containing a person-marked present participle, *ķuntə* appears in finite clauses.

(16) os mà **kįjtam** **kå** rut' kăntəγ tiγ$_{o}$tə ʌåtnə
also I leave.partimp.1sg if Russian Ostyak appear.partimp time.iness
kŏʌnə wă̆ʌʌi.
how kill.pass.prs.3sg
'If he leaves me, how do people kill him when they appear?' (Honti 1978b, 128/7)

Temporal relations are often expressed by person-marked participle + postposition constructions:

(17) jăkə jŏwətta ʌatnə t'i čemotinən tăm, ăʌintta
home get.partimp.2sg time.iness this suitcase.Px2sg there lie.down.partimp.2sg
ʌatnə tŏw ăsəm uʌŋəna įmte.
time.iness there pillow edge.Px2sg.lat put.imp2sg
'When you go home, put your suitcase beside your pillow at bedtime.'
(Csepregi 1998, 80/12)

It is imaginable then that the word order position of the conditional conjunction has been fixed at the end of the clause on the model of the position of conditional particles or of postpositions. Thus the word order of our two items does not indeed follow the "expected" conjunction pattern but one of them takes the position of particles, the other takes that of postpositions, whereas the rest of pronoun-based conjunctions occur clause initially. However, position in itself cannot play a decisive role: the two edges of clauses are in fact designated positions for conjunctions but this is not an absolute universal. The grammatical status of the two items at hand can be approached from two different angles: from the relation between the clauses they conjoin, and from the part of speech status of the two words. That is, it has to be demonstrated that the items at hand are conjunctions (rather than particles) and that the clauses they connect are related by subordination (or if they are not, what kind of relation there is between the two clauses).

To draw a distinction between conjunctions and particles is not unproblematic since they do not unambiguously differ either morphologically or syntactically (both parts of speech can be characterized by the following properties: they have no role as sentence constituents, they cannot be modified, they cannot be asked questions about, they do not enter into syntactic relationships with other words in the clause, and

they cannot be suffixed; Keszler 2000, 268–81). Thus it is their functions alone ("whether their role is primarily linking or particle-like [modal, estimating, topic-enhancing]", *ibid.*, 280) that can be used to tell them apart. Since other clauses containing particles are stand-alone sentences, whereas those containing the items discussed here require another clause to cooccur with, we should rather say their function is linking:

(18) (a) t'ăķa ăwəs ŏrt ķonγə **t'i** wəjγantəγ.
'And the Nenets leader withdrew.' (perfecivising particle)
(Csepregi 1998, 96/4)

(b) *kem kŭč ʌ'iwətʌət
'As he ran out...'

The other criterion we mentioned is whether these linking items signal subordination or coordination, although these are not necessarily two distinct categories, either. According to traditional grammatical descriptions, coordination differs from subordination in that coordinated clauses are merely connected by some logical relation, some relation of content. By contrast, a subordinate clause is typically a clausal expression of some constituent of the main clause (Keszler *op.cit.*, 472, 531). But there is a transitional range of clauses with a specific semantic content, one subtype of which involves types that are partly detached from their role of expressing some constituent of the main clause. Within this latter category, concession is the type that is the most independent of the main clause (*ibid.*, 520).

Generative classification is based on the interchangeability of clauses: in coordination, the conjunction does not belong to either clause, hence the clauses are interchangeable if the conjunction is left where it is (between the two clauses) but not if it moves along with the second clause. By contrast, in subordination, the conjunction is part of the subordinate clause, hence it can move along with its clause but it cannot be left behind by moving the clause without it. However, this test does not apply in all cases: there are pairs of clauses in a concessive relation in which the conjunction is within the second clause, and conversely, not all subordinate clauses can in fact be moved. Another possibility of drawing a distinction is the investigation of binding relations of noun phrases in the clauses. This method also yields a transitional category: 'independent subordination' belongs to subordination on the basis of movability, but the distribution of binding relations is neither that of subordination nor that of coordination: it is a third type (Kenesei 1992, 537–52).

Finally, a third type of classification (Hopper–Traugott 1993, 163–75) tells the kinds of relationships between clauses apart on the basis of their degree of grammaticalization; this method gives us three classes to begin with. 'Parataxis' is the kind of connection where it is only intonation or — in cases of a higher degree of grammaticalization — a conjunction that links the two clauses. The individual clauses are independent 'nuclei'. In 'hypotaxis', the dependence between the two clauses (the 'nucleus' and the 'margin') is mutual. This kind can be recognized, e.g., by all verbal categories being represented in the nucleus only. The relative independence of the margin, however, is shown by the fact that it may have its own illocutionary force, e.g., its own modality. Finally, in subordination, the clauses cannot have different illocutionary forces, the subordinate clause is equivalent to a constituent of the main clause, and the clauses are conjoined in some way. Taking all three systems of classification into account, then, the following discriminative criteria can be taken into consideration:

1. constituent role or logical relation,
2. interchangeability,
3. binding relations,
4. illocutionary force, and
5. downgradedness, nucleus/margin relationship.

The first of these (as well as the fifth criterion that is rather close to the first) tells us that the clauses under inspection belong to subordination (temporal clause) or to the intermediate range (conditionality, concession, either built on a constituent role or independent of it). Looking at the order of clauses, it appears that in an overwhelming majority of cases the clauses containing the conjunctions at hand are in initial position, but the inverse order is also attested for both conjunctions, hence the clauses are in principle interchangeable:

(19) mà ăwəm imiγə wĕja, ʌăŋ^{c}ʌe kuntə.
'Marry my daughter, if you love her.' (Honti–Rusvai 1977, 225/5)

(20) t'u niŋe uše ʌapasəʌ kŏrəγtaγə jəγ, tŏwə kŭč jŏwətʌən.
'The storehouse of your wife will have all but collapsed by the time you get there.' (Csepregi 1998, 94/25)

The interchangeability of the clauses would be characteristic of subordination; but the rarity of the available examples and their loose 'afterthought' character requires some caution here.

The investigation of binding relations and of whether the two clauses can or cannot have different illocutionary forces would both be very important—but these cannot be studied on a closed corpus, the task would require access to the competence of a native speaker. Finally, the criterion of downgradedness leads us back to the issue of function. The clauses containing the conjunctions under scrutiny here involve finite verb forms, yet they require complementation, a fact that—at least in pairs of clauses in a temporal relationship—may be connected to the aspect of the clause whose temporal structure is completed by that of an event expressed in another clause. All in all, it is highly doubtful whether setting up a novel part of speech category is justified, given that the two items studied here can be described in terms of existing categories and their properties.

Taking all the foregoing into consideration, we wish to conclude this paper by saying that, on the basis of their behaviour, both *kŭč* and *ḳuntə* are to be regarded as items grammaticalized into conjunctions; as well as that—in view of the fact that the development of concessive meaning into temporal meaning is made rather unlikely by conclusions drawn from the general theory of grammaticalization—the derivation of Surgut Ostyak *kŭč* from Russian can probably be discarded. On the same account, it is expedient to regard the temporal meaning as primary within Ostyak, too. In its temporal function, this item is part of a system containing numerous synonymous possibilities, as the temporal relationship between two propositions can be expressed in several ways: by a non-finite verb form + personal suffix + postposition, by a non-finite verb form + personal suffix + case marker, or by a non-finite verb form + personal suffix on its own. Concession can easily be derived from a temporal meaning, and complex examples also abound.

Conditionality can also be expressed by synonymous constructions in addition to the conjunction *ḳuntə*, for instance, by a present participle + personal suffix + particle complex as referred to above. At the same time, we do not have attested instances of this conjunction introducing temporal subordination (or any other kind of subordination) clause initially, whereas clause finally it has a characteristically conditional meaning; it appears that this word order pattern is a peculiarity of its grammaticalization.

References

Bánréti, Zoltán 1983. A megengedő kötőszók szintaxisáról és szemantikájáról [On the syntax and semantics of conjunctions of concession] (Nyelvtudományi Értekezések 117). Akadémiai Kiadó, Budapest.

Csepregi, Márta 1996. Orosz nyelvi hatás a déli osztják szintaxisban [Russian influence in Southern Ostyak syntax]. In: Edit Mészáros (ed.): Ünnepi könyv Mikola Tibor tiszteletére [Festschrift for Tibor Mikola], 60–7. József Attila Tudományegyetem, Szeged.

Csepregi, Márta 1998. Szurguti osztják chrestomathia [A Surgut Ostyak reader]. Studia uralo-altaica supplementa. József Attila Tudományegyetem, Szeged.

Dér, Csilla Ilona 2002. Bemerkungen zur Grammatikalisierung als Erscheinung des Sprachwandels. In: Acta Linguistica Hungarica 49 : 149–78.

Harris, Alice C. – Lyle Campbell 1995. Historical syntax in cross-linguistic perspective. Cambridge University Press, Cambridge.

Hartung, Liselotte 1999. Zur Entwicklung des chantischen Konjunktionalsystems. In: Hasselblatt – Jääsalmi-Krüger (1999, 165–70).

Hasselblatt, Cornelius – Paula Jääsalmi-Krüger (eds) 1999. Europa et Sibiria: Beiträge zu Sprache und Kultur der kleineren finnougrischen, samojedischen und paläosibirischen Völker. Gedankband für Wolfgang Veenker. Otto Harrassowitz, Wiesbaden.

Honti, László 1978a. Szurguti osztják szójegyzék [A Surgut Ostyak word list]. In: Nyelvtudományi Közlemények 80 : 327–45.

Honti, László 1978b. Tromagáni osztják szövegek [Tromagan Ostyak texts]. In: Nyelvtudományi Közlemények 80 : 127–39.

Honti, László – Julianna Rusvai 1977. Pimi osztják szövegek [Pim Ostyak texts]. In: Nyelvtudományi Közlemények 79 : 223–32.

Hopper, Paul J. – Elisabeth Closs Traugott 1993. Grammaticalization. Cambridge University Press, Cambridge.

Kálmán, Béla 1961. Die russischen Lehnwörter im Wogulischen. Akadémiai Kiadó, Budapest.

Kenesei, István 1992. Az alárendelt mondatok szerkezete [The structure of subordinate clauses]. In: Ferenc Kiefer (ed.): Strukturális magyar nyelvtan 1. Mondattan [A structural grammar of Hungarian 1. Syntax], 531–713. Akadémiai Kiadó, Budapest.

Keszler, Borbála (ed.) 2000. Magyar grammatika [Hungarian grammar]. Budapest, Nemzeti Tankönyvkiadó.

Munkácsi, Bernát 1894. A vogul nyelvjárások szóragozásukban ismertetve [Suffixation in Vogul dialects] (Ugor füzetek 11). MTA, Budapest.

Paasonen, Heikki – Edith Vértes 2001. H. Paasonens surgutostjakische Textsammlungen am Jugan. Neu transkribiert, bearbeitet, übersetzt und mit Kommentaren versehen von Edith Vértes (MSFOu. 240). Suomalais-Ugrilainen Seura, Helsinki.

Rédei, Károly (ed.) 1986–1988. Uralisches Etymologisches Wörterbuch. Akadémiai Kiadó & Otto Harrassowitz, Budapest & Wiesbaden.

Sauer, Gert 1993. Zur Abgrenzung der russischen und tatarischen Lehnwörter in den obugrischen Sprachen. In: Marianne Sz. Bakró-Nagy – Enikő Szíj (eds): Hajdú Péter 70 éves [Péter Hajdú is 70]. Linguistica Series A, Studia et Dissertationes 15, 353–8. MTA Nyelvtudományi Intézet, Budapest.

Sauer, Gert 1999. Ostjakisch *köč*—ein russisches Lehnwort? In: Hasselblatt – Jääsalmi-Krüger (1999, 387–90).

Steinitz, Wolfgang 1966. Dialektologisches und etymologisches Wörterbuch der ostjakischen Sprache. Akademie Verlag, Berlin.

Vasmer, Max 1958. Russisches etymologisches Wörterbuch. Carl Winter Universitätsverlag, Heidelberg.

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ASPECT MARKERS GRAMMATICALIZED FROM VERBS IN KAMAS

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Abstract

The article presents some results of research into aspectual auxiliaries of Kamas (Southern Samoyed; extinct). Code-copied from Turkic, Kamas started to use verbs with salient aspectuality to modify the aspectual meaning content of another verb or the representation of a whole state of affairs. The formal means by which this modification could take place was a converb construction, in which the modified main verb figured as the non-finite verb form (the converb). At the end of the grammaticalization process, some of the auxiliaries ended up as suffixes. Within Kamas sources from the middle of the 18th to the beginning of the 20th century, the various degrees of grammaticalization are documented. The relevant grammaticalization processes are semantic reduction, fixation and formal reduction; the first two processes can be understood as prerequisites for the third process which puts an end to the coexistence of grammaticalized and non-grammaticalized items. The main Kamas auxiliaries are listed and, according to their function, grouped into non-transformative vs. initial-, final-, and momentaneous-transformative auxiliaries.

In Kamas[1] sources, one can observe a multi-stage grammaticalization pattern in which full verbs turned into aspectual auxiliaries as a first step, and then into aspectual suffixes. In older sources on Kamas, especially Castrén (1847), most auxiliaries still occur in their full form, cf. also Schiefner (1854). Some 65 years later, Donner (1912/1914) found a few auxiliaries that are better taken to be aspectual suffixes. The use of Kamas aspectual auxiliaries is an instance of code copying from neighbouring Turkic languages, especially Hakas; the further development of suffixalization is an internal development in Kamas.[2]

[1] Kamas is a Southern Samoyed language that was still spoken in the early twentieth century by approximately 50 people on the northern side of the Eastern Sayan Mountains. In Abalakova, their last village, Castrén (1847) and Donner (1912/1914) collected language data. Kamas had been strongly influenced by Turkic languages for centuries but its last speakers shifted to the use of Russian.

[2] The Kamas system of auxiliaries replaced an earlier system in which aspect had been marked by endings inherited from Proto-Samoyed. That system can be

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In what follows, the two main steps of that grammaticalization process will be discussed, along with the major auxiliaries and aspectual suffixes, respectively.

1. First, we have to mention the syntactic device that constitutes a link between the auxiliary and the main verb it modifies. This device is known as **converb construction** involving the general Kamas converb *-LA?*. Converbs are non-finite verb forms that are in an adverbial relationship with another verb form. The term 'converb' can be replaced by 'adverbial participle', 'gerund', or Russian *deeprichastie*.

Converb constructions are in principle multifunctional, i.e., their exact meaning depends on context.[3] In (1), there are two events of which one precedes the other:

(1) šaškan mola? ńergəlü?bijə?
magpie become.cv[4] fly.inch.past.3pl
'Turning into magpies, they [the ghosts] flew away.' ('After they had turned into magpies, the ghosts flew away.' or 'The ghosts turned into magpies and flew away.')
(Joki 1944, 98: *šāškan mɔ́лаńergu'u'лubi*; Klumpp 2002, 120)

found in Selkup, the nearest relative of Kamas. The endings in that system can partly still be found in Kamas, but they ceased to be productive there: e.g., Kamas *kan-* 'go away' : *kandə-* 'go' = Selkup Taz *qẹn-* 'go away' : *qẹntị-* 'go', but this imperfective ending, **-NTə*, is never found on any of the numerous Turkic loan verbs found in Kamas (whereas other inherited verbal derivation patterns are productive even on Turkic loan verbs, cf. Klumpp 2002, 47). Aspectual auxiliaries are used in the whole Turkic language family. Similar code copying—without formal reduction, however—occurs in other Uralic–Turkic contact regions, e.g., in the Volga–Kama region in Mari and Udmurt, where the models had been Chuvash and Tatar constructions (cf. Pischlöger 2001 for an overview); Mator aspectual auxiliaries are independent borrowings from Turkic (Helimski 1997, 188). Selkup also has converb constructions whose meaning is aspectual (e.g., Bolzhunovskaya 1998), but the concrete aspectual auxiliary systems of Selkup and Kamas can hardly be seen as common inheritance.

[3] This is formulated by König (1995, 60) as follows: "the semantic contribution made by the converb itself to utterance meaning must certainly be analyzed in such a way as to be a suitable basis for all possible interpretations."

[4] Abbreviations: # = word boundary, aor = aorist, cv = converb, def = definite conjugation, Gram = grammatical morpheme, inch = inchoative, Lex = lexical morpheme, mom = momentaneous, tf = transformative.

The connection between the two events can often be interpreted as purpose (2) or cause (3):

(2) ijabə ṕele? kambi
mother.acc.3sg search.cv go.away.past
'He left looking for his mother.' ('He left in order to look for his mother.' or 'He left to look for his mother.' or 'He left and looked for his mother.')
(Joki 1944, 197: *ịāb³ p'elɛ kámbi*; Klumpp 2002, 122)

(3) mazərogən măndola? dĭ ne ba?lu?bi bĭssittə
smoke-hole.loc see.cv this woman stop.mom.past drink.inf.lat
'Seeing [the man-eater] in the smoke-hole, the woman stopped drinking.' ('Because she saw the man-eater in the smoke-hole, she stopped drinking.')
(Joki 1944, 90: *māzərōγon məndōʌa di nɛ bă̆ʌubi bịsitti*; Klumpp 2002, 121)

As can be seen in (3), other items may intervene between the converb and the finite verb. According to the unmarked word order, the converb precedes the finite verb, but the inverse order is also possible, as in (4):

(4) măn ej tĭmnem ṕaŋdəla?
I not know.pres.1sg write.cv
'I cannot write.'
(Joki 1944, 196: *man ę̣j təmnę̣m piaŋdl̥å*; Klumpp 2002, 123)

2.1. The posterior constituent of such a construction can also be an aspectual auxiliary. In that case, word order is not free: the auxiliary invariably follows the converb and no other material can intervene. This phenomenon is referred to by Lehmann (1995, 158) as 'fixation', a process whereby 'syntagmatic variability' is reduced.

A frequently occurring auxiliary is *i?bə* whose main-verb meaning is 'lie'. The function of that auxiliary is marking imperfective aspect. In the next example (5), coming from Castrén's material, the auxiliary picks one of the two possible meanings of the verb *nu* (perfective 'stop' and imperfective 'stand').

A purpose or cause reading of this construction, as in (2) and (3), would be highly curious: ?'I stand in order to lie', ?'I stand because I lie'. Its temporal reading, as in (1), would be possible ('I stand, then I lie') but Castrén's gloss 'стою' does not suggest this. We can conclude that the verb 'lie' does not occur here in its original meaning but as an auxiliary (see **2.2.** for details on its function). At this stage of grammaticalization,

(5) nula? i?bəm
stop/stand.cv LIE[5].aor.1sg
'I am standing.' (Literally: 'I lie standing.')
(Castrén 1847, 115: *nula'i'bym*; Klumpp 2002, (45a))

it is impossible to decide whether the posterior constituent of the converb construction is an auxiliary or a full verb except on the basis of semantic criteria. This is because formally the two verb forms are not distinct, see (6) where the posterior constituent of the converb construction, *i?bə* 'lie' is a full verb:

(6) tăn kădə mola? i?bəl
you how become.cv lie.aor.2sg
'Why are you lying here?'
(Joki 1944, 99: *tăn kådə m°la' ĭ'p̀əɹ*; Klumpp 2002, 68)

It is a widely known phenomenon in grammaticalization research that grammaticalized and non-grammaticalized forms, respectively the old and the new use, survive side by side. This phenomenon is called **split** by Heine–Reh (1984, 57), and **divergence** by Hopper–Traugott (1993, 116–20).[6]

2.2. The function of the auxiliary 'lie' in (5) is to select the imperfective meaning ('stand') of the verb *nu* 'stop/stand'. It has a similar function in (7) where it is in construction with the verb *tu?bdə* 'row'. That biaspectual stem has two meanings: semelfactive 'perform one stroke' and iterative 'perform several/many strokes'. The auxiliary selects the imperfective (iterative) meaning:

[5] SMALL CAPITALS in glosses indicate that the verb occurs here as an auxiliary, rather than in its full meaning.

[6] Unfortunately, the Kamas sources do not give relevant information concerning stress. Still, it seems to be fair to assume that the auxiliary construction had a different stress pattern. At least in Turkic languages, such difference can be found (cf., e.g., Demir 1993, 74).

(7) tuʔblaʔ iʔbəm
row.cv LIE.aor.1sg
'I am rowing' (Literally: 'I lie rowing')
(Castrén 1847, 115: *thu'bla'i'bym*; Klumpp 2002, (46a))

In short, the function of the auxiliary 'lie' is to mark an event as an unbounded situation. The meaning of the verb 'lie', on the other hand, can be described as "a body is positioned on a base such that a larger part of the former touches the latter and it is likely that no change of that position will occur for a while". Of these meaning components, "no change" is important for imperfective aspect. The verb 'lie' can transfer that inherent aspectual property onto the whole event described in the converb construction. Another component of its meaning, "a larger part of the body touches the base" is unimportant, indeed disturbing. In order for the verb 'lie' to turn into an aspectual auxiliary, it is not only required for it to contain the relevant meaning component but also for its non-appropriate meaning components to fade. This can be called **semantic reduction**. The grammaticalized auxiliary will not be called "semantically reduced verb" but rather "semantically reduc**ible** verb" here, given that it may retain some other meaning components unreduced. Schönig (1984) speaks of "full verb meaning transfer" with respect to Tatar auxiliaries; cf. (8) where the meaning 'lie' is not incompatible with the meaning 'sleep' of the main verb, yet Castrén's gloss shows that the verb 'lie' occurs here in its auxiliary role:

(8) kunollaʔ iʔbəm
sleep.cv lie.aor.1sg
'сплю; I am sleeping' (Literally: 'I lie sleeping.')
(Castrén 1847, 186: *kunolla'i'bym*; Klumpp 2002, (44a))[7]

2.3. In addition to *iʔbə* 'lie', the items *amnə* 'sit', *nu* 'stand', *kandə* 'go' and *mĭn* 'go' also occur as imperfective auxiliaries, marking durative, fre-

[7] Another example involving the verb *saʔmə* 'fall' expressing momentaneous aspect is as follows. In the first sentence, the original meaning has completely faded away, whereas in the second, it may have been retained:
(i) tĭ nükke korolaʔ saʔməbi
'This woman got angry ["fell angry"]' (Joki 1944, 197; Klumpp 2002, (534))
(ii) nuna lăbəlaʔ saʔməbi
'A rocky wall collapsed ["fell collapsing"]' (Joki 1944, 85; Klumpp 2002, (535))

quentative, iterative, or habituative aspect readings (aktionsarten). The function of perfective auxiliaries, on the other hand, is to indicate that the event involves a definite change of situation. This can be entering a situation (ingressive and inchoative aktionsarten), leaving a situation (egressive and resultative actionsarten), or crossing both borders at once (momentaneous aktionsart). These three subgroups will be called, following Johanson (1971) and Schönig (1984), **initial-transformative**, **final-transformative**, and **momentaneous-transformative**, respectively, whereas the imperfective group will be referred to as **non-transformative**.

Let us mention two examples of the perfective group. The first is the opposite of the imperfective (5) above. Here, the auxiliary *kan-* whose full verb meaning is 'go away', selects the perfective meaning 'stop' of the biaspectual verb *nu-* 'stop/stand'.

(9) inet nula? kambi
horse.3sg stop/stand.cv GO.AWAY.past
'His horse stopped.' (Literally: 'His horse went stopping.')
(Joki 1944, 92, *īnɛt nuлāmbi*; Klumpp 2002, (440a))

Apart from *kan-*, final-transformative auxiliaries also include *šo-* 'arrive', *kun-* 'lead away' and *ba?bdə-* 'throw away'; initial-transformative auxiliaries are *u?bdə-* 'stand up' and *kojo-* 'stay'. The use of the momentaneous-transformative auxiliary *sa?mə-* 'fall' can be exemplified as in (10):

(10) Ket't'ün güd'ər [...] u?la? sa?məbi
Ket't'ün güd'ər stand.up.cv FALL.past
'K.g. jumped up.' (Literally: 'K.g. fell standing up.')
(Joki 1944, 95: *kɐt'śün-gɯd'ɯr* [...] *u'la sa'məbi*; Klumpp 2002, (532))

3.1. The grammaticalization of some Kamas auxiliaries stopped at the stage at which there is no formal difference between the original main verb and the auxiliary. Other verbs, like 'lie', went through further development whereby they changed not only in their meaning but also in their form. In the case of 'lie', the result of formal reduction is the following ((11a) = (5)):

(11) (a) nula? i?bəm
stop/stand.cv LIE.aor.1sg
'I am standing.'
(Castrén 1847, 115: *nula'i'bym*; Klumpp 2002, (45a))

(b) nula?bəm
stand.imperf.aor.1sg
'I am standing.'
(Donner 1912/1914, 147: *ŋŭ̯ʌiă̆'bŏ̯m*; Klumpp 2002, (105b))

(c) bazo? a?d'əgən nula?bə
again road.loc stand.imperf.aor.1sg
'He is standing on the road again.'
(Joki 1944, 98: *bāza a't'əɣ̯ən nu'labo*; Klumpp 2002, (105d))

In all three examples, the same derivation is seen, with an important difference. The first example has four syllables and comes from Castrén's material collected in 1847. The second and third examples, however, were recorded by Donner in 1914, and consist of only three syllables. Hence, **formal reduction** resulted in the diminution of syllable count, a process that initiates what Heine and Reh (1984, 21) refer to as **erosion**: "bisyllabic > monosyllabic > simple consonant/vowel > germination > tonal/stress rule". Lehmann (1995, 126) calls this type of grammaticalization "phonological attrition", the relevant parameter being "integrity". Bybee et al.'s (1994, 19) hypothesis says that "semantic reduction **is paralleled** by phonetic reduction" (emphasis mine, G.K.). In the case of Kamas auxiliaries, as we saw, there are semantically reduced verbs that are formally non-reduced. The converse situation does not arise. Therefore, it is better to say that semantic reduction is a prerequisite for formal reduction.

3.2. Which items undergo formal reduction? It is not the whole auxiliary that changes: only its stem does. But the change does not merely concern the stem of the auxiliary—it also affects the ending of the converb before it.

(12)

nu+la?#	i?bə+m		>	nu+la?bə+m
stand+cv	lie+1sg			stand+LIE+1sg
Lex_a+$Gram_a$	Lex_b+$Gram_b$		>	Lex_a+$Gram_c$+$Gram_b$

More exactly, it is not only the verb 'lie' that is grammaticalized: it is the verb 'lie' and the ending of the converb that are grammatical-

ized together. Bybee et al.'s (1994, 4–5) definition of grammaticalization reads like this: "... grammaticalization theory begins with the observation that grammatical morphemes develop gradually out of lexical morphemes **or combinations of lexical morphemes with lexical or grammatical morphemes**" (emphasis added, K.G.).

3.3. Of course, there are some morphosyntactic consequences of this change: one is the loss of word status by the auxiliary. In a converb construction, syntactically, the auxiliary is the main verb, whereas semantically the non-finite verb is the main verb. After formal reduction, the original auxiliary ceases to be a separate word; rather, its stem merges with the converb ending into a new, complex suffix. The change does not extend to other morphological information like tense, person, or number. That information continues to be represented after the segment that used to be the stem of the auxiliary. But the new carrier of that information is now the original non-finite main verb that has turned into a finite verb with the suffix(es) of the former auxiliary, thus becoming a main verb syntactically, too. The rest of the converb ending does not signal word boundary any more but becomes the initial portion of a new, complex suffix. Since all auxiliaries were grammaticalized on the basis of the general *LA?-* converb, formal reduction has yielded a new, *L*-initial class of aspectual suffixes. These new aspect markers occupy the position of the inherited valence suffix and the tense/mood suffix in the word, as shown by (13):

(13) dĭ sĭkt-ö-**l̄ām**-bi (< sĭktö**le?** **kambi**)
he strangle.intr.**aspect**.past (< strangle.intr.cv **go.away**.past)
'He hanged himself.'
(Joki 1944, 58b: *dị sə̂ktɯəlām̄bi*; Klumpp 2002, 286)

The result of the increase in "coalescence" or "boundedness" (Lehmann 1995, 148), i.e., the suffixalization of the former auxiliary, can be clearly seen from the change of vowel harmony pattern, see (14) where back-harmonic *amna* 'sit' turned front-harmonic as an auxiliary:

(14) dĭ šü?bdöbi gijən bü bejlemne (< bejle? a̲mna̲)
he wake.up.past where.loc river cross.imperf.aor (< cross.cv sit.aor)
'He woke up where they cross the river.'
(Joki 1944, 98: *də šɯ'^{b}dōbi gi̯i̯ɛn bū be̯i̯lɛmnɛ*; Klumpp 2002, (33))

The loss of word status has not only phonological but also syntactic criteria; see (15) where the original intransitive verb *amnə-* 'sits' is grammaticalized to the extent that it may receive an object-conjugation marker that would have been ungrammatical earlier:

(15) pan tabəndə ularzaŋdə t'abolamnət (< t'abola? *amnə+t)
tree.gen trunk.loc.3sg sheep.pl.3sg keep.imperf.aor.3sg.def
(< keep.cv sit.aor.3sg.def)
'She is [sitting and] keeping her sheep at the trunk of the tree.'
(Joki 1944, 95: *p'an tābəndə, ulārzaŋdə t'abōlamnəd*; Klumpp 2002, (20))

4. Formal reduction includes a number of processes like apocope *-LA? amnə- > -LAmnə-*, *-LA? u?bdə- > -LU?(bdə)-* or consonant loss *-LA? kandə- > -LĀndə-*, *-LA? ba?bdə- > -LA?(bdə)-*, cf. the four stages of the reduction of the verb *ba?bdə-* (in Castrén's and Donner's original notes):

(16) (a) phällebaábdewiäm 'I put it down' (Castrén, cf. Klumpp 2002, (340))
(b) măn kuχлavābiom 'I killed it' (Donner, cf. Klumpp 2002, (370d))
(c) sublaabdewiam 'I scooped it' (Castrén, cf. Klumpp 2002, (349))
(d) d'ă̆ɣă̆m ķŭлa'bi̯ŏm 'I caught sight of the river'
(Donner, cf. Klumpp 2002, (377c))

Table 1 below summarises the results of formal and semantic reduction of twelve Kamas verbs.[8] In the fifth column, formally reduced formations can be seen. Here (if not earlier) we have to do with a formally and functionally homogeneous paradigm, due to "paradigmaticization" (Lehmann 1995, 135).

5. It becomes clear from the table that the degree of grammaticalization among Kamas auxiliaries is not uniform. In my view, it is unlikely that this has purely phonological reasons: if, for instance, the *k* of *kan-*

[8] The number of auxiliaries is even larger; but the other auxiliaries are not listed in the table because they also have directive and other functions in addition to aspectual ones (*i-* 'take', *i-* 'be', *mĭ-* 'give', *üzə-* 'dismount'), or else their function cannot be ascertained due to lack of sufficient data (*i?də-* 'hit'). The verb *nu-* 'stand' can be found in the table, although its indirective (evidential) function is also likely to exist: Kamas *-LA? nu-* is formally equivalent to Turkic *-(I)ptIr-* < *-(V)p turur* that is a "marker of indirectivity" (Johanson 2000, 72).

Table 1

Semantic and formal reduction of Kamas aspectual auxiliaries

ASPECT	ASPECT READING	AUXILIARY SUBCLASS	SEMANTICALLY REDUCIBLE AUXILIARIES	FORMAL REDUCTION	DERIVATION > CONJUGATION
IMPERFECTIVE	Durative, frequentative, iterative and habitive aktionsarten	Non-transformative stative auxiliaries	*amnə-* 'sit' *i?bə-* 'lie' *nu-* 'stand'	> *-LAmnə-* > *-LA?bə-* —	Imperfective present?
		Non-transformative dynamic auxiliaries	*kandə-* 'go' *mĭn-* 'go'	> *-LĀndə-* —	
PERFECTIVE	Inchoative and ingressive aktionsarten	Initial-transformative auxiliaries	*u?bdə-* 'stand up' *kojo-* 'stay'	> *-LU?(bdə)-* —	
	Resultative and egressive aktionsarten	Final-transformative auxiliaries	*kan-* 'go away' *šo-* 'arrive' *kun-* 'lead away' *ba?bdə-* 'throw away'	> *-LĀN-* — — > *-LA?(bdə)-*	
	Momentaneous aktionsart	Momentaneous-transformative auxiliaries	*sa?mə-* 'collapse'	—	

can disappear, why that of *kun-* cannot? Or, if *b-* can be dropped from *ba?bdə*, why is it that *m-* cannot be dropped from *mĭn*? Hence, the question arises whether we have to do with a unitary derivation of aspects at all, or whether there is a correlation between the two stages of grammaticalization and the two functions. In his well-known definition, Kuryłowicz (1965/1975, 52) points out that "grammaticalization consists in the increase of the range of a morpheme advancing from a lexical to a grammatical **or from a less grammatical to a more grammatical status**, e.g., from a derivative formant to an inflexional one" (emphasis added, G.K.). The more highly grammaticalized aspectual auxiliary 'lie' occurs very frequently in Kamas texts. Interestingly, it never occurs in

the past tense, only in unsuffixed aorist.[9] The Hakas (Turkic) verb for 'lie', *čat-*, has been grammaticalized to present tense, *-(p)čA*[10] (e.g., Anderson 1998, 25; Johanson 1995, 93). From this, it might be concluded that the suffix *-LA?bə-* in Castrén's and Donner's sources already corresponded to the present, past, and future markers, and belonged to the paradigm of each verb, e.g., in the case of *nu-* 'stop/stand':

(17) Present: nu-ga-m
Imperfective present: nu-la?bə-m
Future: nu-la-m
Past: nu-bja-m

If *-LA?bə-* is indeed a kind of present tense marker, we would expect it to exist in negative forms, as well, given that Hakas present tense also has a negative version (see e.g., Anderson 1998, 45; Baskakov–Borgoyakov 1975, 202). However, in Kamas sources, *-LA?bə-* is not found in negative forms. This may be due to mere chance, but it is also possible that *-LA?bə-* is still a marked aspectual form that has no negative counterpart because the aspectual modification concerned is only relevant if the event actually takes place (Klumpp 2001, 124). I think the grammaticalization of *-LA?bə-* for present tense was under way when the extinction of Kamas in the first half of the twentieth century put an end to that change.

6. Certain conclusions can be drawn from the grammaticalization of Kamas auxiliaries, even if these are not entirely new insights within grammaticalization research: in order for a lexical item to assume grammatical function, an appropriate meaning component is required (**2.2**). Its disturbing meaning components may fade away, but its original meaning may also survive (**2.2**). The semantic reduction of the item undergoing grammaticalization and the fixation of its position within the syntagm (**2.1**) are prerequisites for formal reduction (**3.1**). Formal re-

[9] It is true that it may also occur in the present or future tenses. In these cases, its function is inchoative-transformative (Klumpp 2002, 202), e.g.,

dĭ bazoʔ šünə păʔlaʔbəlje
he again fire-lat sink.inch.tf.pres
'He sinks into the fire again [and stays in it].'
(Donner 8 : IX, *dᵊ bāzu šunu poʻlāʻᵇli*; Klumpp 2002 (108))

[10] *-(p)* is the original converb ending that only survived postvocalically.

duction puts an end to the coexistence of grammaticalized and non-grammaticalized item. The deletion of the formal means of grammaticalization (**3.2**) restores the balance between syntax and semantics (**3.3**). Formal reduction does not take place in a unitary manner (**4**) and further grammaticalization can remove certain items from the paradigm of grammaticalized items (**5**).

To finish with, let us say a few words about the frequency of Kamas aspectual auxiliary constructions. This can be illustrated by Donner's Tale 8 (Joki 1944, 94–9) in which 120 finite verbal predicates are found of which 41, or 34%, are aspectual converb constructions (Klumpp 2002, 330). This suggests that aspectual auxiliaries cannot be taken to represent a marginal phenomenon; rather, they must have played a central role in the Kamas verbal system.

References

Anderson, Gregory D. 1998. Xakas. LINCOM Europa: Languages of the world: Materials 251. LINCOM, Munich & Newcastle.

Baskakov, Nikolay A. – Mikhail I. Borgoyakov 1975. Грамматика хакаского языка. Наука, Москва.

Bolzhunovskaya, Lyudmila M. 1998. Способы глагольного действия в диалектах селкупского языка. Автореферат, Новосибирск.

Bybee, Joan – Revere Perkins – William Pagliuca 1994. The evolution of grammar. Tense, aspect and modality in the languages of the world. Chicago University Press, Chicago & London.

Castrén, Matthias Alexander 1847. Manuscripta Castréniana XIX. Samoiedica 13: Kamass-Samoiedica. University Library, Helsinki.

Demir, Nurettin 1993. Postverbien im Türkeitürkischen (Turcologica 17). Harrassowitz, Wiesbaden.

Donner, Kai 1912/1914. Field notes (dictionary, grammar, texts). Manuscript. Archives of the Finno-Ugric Society, Helsinki.

Heine, Bernd – Mechthild Reh 1984. Grammaticalization and reanalysis in African languages. Buske, Hamburg.

Helimski, Eugene 1997. Die matorische sprache. wörterverzeichnis — grundzüge der grammatik—sprachgeschichte (studia uralo-altaica 41). SZTE Finnugor Tanszék & MTA Nyelvtudományi Intézet, Szeged & Budapest.

Hopper, Paul J. – Elisabeth Closs Traugott 1993. Grammaticalization. Cambridge University Press, Cambridge.

Johanson, Lars 1971. Aspekt im Türkischen (Acta Universitatis Upsaliensis/Studia Turcica Upsaliensia 1). Almqvist & Wiksell, Uppsala.

Johanson, Lars 1995. Mehrdeutigkeit in der türkischen Verbalkomposition. In: Marcel Erdal – Semih Tezcan (eds): Beläk Bitig. Sprachstudien für Gerhard Dörfer zum 75. Geburtstag (Turcologica 23), 81–101. Harrassowitz, Wiesbaden.

Johanson, Lars 2000. Turkic indirectives. In: Lars Johanson – Bo Utas (eds): Evidentials, 61–87. Mouton de Gruyter, Berlin & New York.

Joki, Aulis J. (ed.) 1944. Kai Donners Kamassisches Wörterbuch nebst Sprachproben und Hauptzügen der Grammatik (Lexika Societatis Fenno-Ugricae 8). SUS, Helsinki.

Klumpp, Gerson 2001. Alte Negation und neue Tempora im Kamassischen. In: Heiner Eichner (ed.): Fremd und Eigen. Untersuchungen zu Grammatik und Wortschatz des Uralischen und Indogermanischen, in memoriam Hartmut Katz, 115–28. Edition Praesens, Wien.

Klumpp, Gerson 2002. Konverbkonstruktionen im Kamassischen (Veröffentlichungen der Societas Uralo-Altaica 58). Harrassowitz, Wiesbaden.

Kuryłowicz, Jerzy 1965/1975. The evolution of grammatical categories. In: Esquisses linguistiques II, 38–54. Fink, München.

König, Ekkehard 1995. The meaning of converb constructions. In: Ekkehard König – Martin Haspelmath (eds): Converbs in cross-linguistic perspective. Structure and meaning of adverbial verb forms adverbial participles, gerunds, 57–95. Mouton de Gruyter, Berlin & New York.

Lehmann, Christian 1995. Thoughts on grammaticalization (LINCOM studies in theoretical linguistics 1). Lincom Europa, München & Newcastle.

Pischlöger, Christian 2001. Hilfsverbverbindungen in einigen uralischen und nichturalischen Sprachen. In: Tõnu Seilenthal (ed.): Congressus Nonus Internationalis Fenno-Ugristarum, 7–13.8.2000, Tartu. Pars IV, 45–52. University of Tartu, Tartu.

Schiefner, Anton (ed.) 1854. M. Alexander Castréns Grammatik der samojedischen Sprachen. Nordische Reisen und Forschungen. Bd. 7. Academy of Sciences, St. Petersburg. (Reprinted in 1919 by Zentralantiquariat der DDR, Leipzig.).

Schönig, Claus 1984. Hilfsverben im Tatarischen. Untersuchungen zur Funktionsweise einiger Hilfsverbverbindungen. Harrassowitz, Wiesbaden.

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SPATIAL ORIENTATION AND GRAMMATICALIZATION

KATALIN SIPŐCZ

Abstract

The focus of this paper is on a probably universal type of grammaticalization whereby body part terms turn into place-denoting morphemes (adverbs, postpositions or local case markers). The linguistic expressions of the major areas of deictic orientation in the Mansi language are analysed on the basis of their lexical sources. According to general typological studies, the lexical origin of spatial morphemes shows considerable agreement across languages of the world: most of them go back to names of body parts. The paper shows that body part term sources follow the universal patterns in Mansi, too: in that language, 'back', 'head', and 'heart' have turned into general spatial markers. Exploring the system of spatial morphemes in Mansi, the paper argues that the etymology of those morphemes often reveals what is called a "relational object-part" origin; that class of sources is frequently attested in the typological literature, too. Finally, the paper tries to find out how unequivocally the body part terms that have turned into spatial markers can be determined. It is concluded that data from the various Uralic languages contradict some of the general statements found in the typological literature.

1. Introduction

This paper will be concerned with one of the most general and presumably universal types of grammaticalization: that of names of body parts. The grammaticalization of names of body parts may take several directions: they may turn into pronouns (primarily reflexive, emphatic, or reciprocal ones), or numerals; the noun meaning 'hand' often develops into a possessive marker (cf. *lay one's hands on sg* > *(begin to) possess sg*), the noun meaning 'head' occurs in a variety of abstract grammatical roles (cf. the head as the centre of intellectual activity). Names of body parts may also develop into various other types of suffixes (e.g., English *-ly* < **liç* 'body': *manly* < **mann-liç*).[1] The most general direction of their grammaticalization, however, results in place-denoting expressions: adverbs, adpositions, or suffixes (Heine et al. 1991, 152; Heine 1997, 19–29, 35–66; Heine 1999; Svorou 1993, 70–77).

[1] Cf. Bybee: http://www.unm.edu/~jbybee/Cognitive.doc

1216–8076/$ 20.00

The linguistic partitioning of space, i.e., the linguistic projection of spatial orientation is a topic that has for a long time occupied the attention of not only linguists but also researchers in other disciplines more or less related to linguistics, simply because the relationship between spatial cognition and language raises a number of diverse issues. Due to an upswing of cognitive linguistic research, a number of projects have targeted this area in the past few decades and numerous papers have given new perspectives to these issues. As a consequence of the basic character of cognitive research, such investigations are often concerned with to what extent and in what ways spatial systems found in the individual languages are universal or language particular.

2. Egocentric and anthropomorphic features of spatial orientation

It is a matter of common knowledge that languages are fundamentally anthropocentric; one of the most telling examples of this is that most spatial terms are anthropomorphic. In determining the various directions, positions, and places, our own body and its parts constitute a natural (central) point of departure. The semantics of body parts is relational in the first place as the meanings of these terms involve part/whole relationships and—consequently—positional components. Due to the anthropomorphic and egocentric nature of language, what is behind us is at the **back**, what is to the right or to the left is **side**ways, what is in front of us is **facing** us, etc. The body part origin of the most general locative expressions is widespread in any language.

That "body-centred" character is present in other features of spatial language as well. Our perception of space is organized along three axes: the vertical axis is based on our experience of gravitation but the horizontal axis producing the opposition FRONT–BACK[2] as well as the lateral axis telling right from left are based on the human body. If we want to refer to the position of inanimate objects, we have to localize them in the given space and we have to determine their parts (front, back, etc.), an activity in which an anthropocentric starting-point is essential. A factor that plays a role in that process is similarity of shape, the analogy of the human body, whenever a body-like perception of the given object is

[2] Terms like FRONT, BACK, IN, OUT, UP, DOWN, etc. are symbols of basic spatial categories.

possible. In fact, this is what accounts for the widespread polysemy of body part terms observable in all languages, e.g., *the leg of a table, the eye of a needle, the neck of a bottle, the toe and tongue of a shoe, the back of a chair, the spine of a book, the rib and the foot of a hill,* etc. Such anthropomorphic and egocentric character is also observable where there is no similarity whatsoever between the given object and the human body (or the body of an animal). We can furthermore observe that the orientation of objects may also be influenced by their functions. The front of a cupboard is at its door, that of a TV set is at its screen, and that of a telephone is on the side where you can dial. That is, the front of an object is the part at which human activity is directed in the case of the given object. This is explained partly by egocentrism, and partly by anthropomorphism, since it is obvious with respect to a human body, too, which side is the dominant one (we face forward, we communicate forward, the activity of our hands is also directed to the front). In the case of moving objects, the direction of motion determines their orientation. The part of an object that is in the direction of its motion is perceived as its front; again, the similarity with the human body is straightforward.[3] Also, the concepts of IN and OUT, just like the category of BOUNDARY in general, are based on the analogy of the boundaries of, and the cavities within, the human body.

Anthropocentricity is also revealed by the existence of local expressions that are applied to people only. This property is exhibited, e.g., by Finnish adverbs of the *kasvokkain* (< *kasvo* 'face'), *nenäkkäin* (< *nenä* 'nose'), *nokikkain* (< *nokka* 'beak') 'opposite' type whose use generally implies a human participant (Ojutkangas 2001, 66). The Hungarian postposition/adverb *szemben* 'opposite' (< *szem* 'eye') is historically similar: its early uses were in the sense 'in somebody's field of sight' (Benkő 1967–1976, III.712). Interestingly, such anthropocentrism also characterizes local expressions that are not of a body part origin. For instance, Svorou writes with respect to the earliest attested prepositional uses of *before, behind* that they initially occurred with pronouns referring to people (Svorou 1993, 119). All of that is naturally connected to the basically anthropocentric nature of spatial perception.

[3] According to Jackendoff and Landau, such orientation of objects is determined by their natural axes: the nature of the main axes (horizontal vs. vertical, directed vs. undirected, etc.) determines what is referred to as the *beginning* or *end* of a given object, its *top* or *bottom*, etc. (Jackendoff–Landau 1992, 99–123).

Spatial terms of a body part origin may be based on both human and animal bodies; that is, they may be both anthropomorphic and zoomorphic in character. But even the latter are anthropocentric: in the perception of the body of an animal, too, human perspective prevails: animals' bodies are usually perceived in terms of species that are important for people, i.e., domestic animals or game.[4] In languages where the lexical source of the reference area UP is a body part term referring to the back of an animal, the semantic change may have been fostered by the fact that people **mount** (sit on top of) saddle animals.

3. Universal features of grammaticalization of the type body part > spatial morpheme[5]

In what follows, spatial terms that originate in body part names will be investigated.

Typological studies of such semantic changes of body part terms have been conducted by Svorou (1993, 70–109), as well as Heine and his coworkers (cf. Heine 1997, 35–65). Svorou's studies are based on data from languages belonging to a variety of language families (he collected spatial terms going back to names of body parts from 55 languages); Heine primarily built his own investigations on data coming from languages of Africa and Oceania. In what follows, I will briefly review claims of the studies mentioned that may serve as an important basis of comparison from the point of view of the present paper. Although the methods of these two authors were slightly different, the nature of my own investigations makes it possible to "add up" their claims and discuss probably universal lexical sources of spatial morphemes in an integrated fashion. (This is not difficult to do partly because the linguistic data—the source lexemes—themselves are largely identical.)

With respect to the lexical sources of place-denoting morphemes, Svorou says that nominal sources are the most frequent but, less often, verbs and sporadically other part-of-speech categories (adverbs, adjectives, participles, and even conjunctions and numerals) are attested in

[4] Heine (1989) calls this the 'pastoralist' model, pointing out that such names are mainly characteristic of East-African pastoral communities. Given that this type also occurs elsewhere, the term 'zoomorphic' seems to be more appropriate (Svorou 1993, 73).

[5] Svorou—following Bybee—uses the term 'spatial gram' (*op.cit.*, 216).

that role. She classifies nominal sources into four groups (*op.cit.*, 66–9), of which the most general group involves (1) names of body parts proper, followed by (2) the "relational object-part class" (side, middle, back, front, etc., cf. Hungarian *elöl* 'in front', *alul* 'at bottom'), (3) the "environmental landmark class" (sky, land, field, road, trace, house, etc., cf. Hungarian *után* 'after' < *út* 'road'), and (4) the "abstract spatial notion class" (place, length, direction, etc., cf. Hungarian *között* 'between' < *köz* 'interstice, interval'). Heine divides nominal sources into (1) body part names and (2) landmark terms. With respect to relational part names, forming a distinct group in Svorou's classification, he points out that these come from either body part names or general spatial terms; hence, etymologically, they can be seen as belonging one or the other group.

On the basis of the data it can be concluded that local expressions going back to body part terms are usually static in character but counterexamples also occur: in some languages it can be observed that the word meaning 'eye' has turned into an allative marker 'toward, in the direction of' or that the word for 'hand' has grammaticalized into an ablative marker (Svorou 1993, 78).

Let us now survey the ways in which the main areas of deictic orientation,[6] the regions of UP, DOWN, FRONT, BACK, BESIDE and IN[7] have been given names by the languages these two authors investigated.

UP: The name of the notion UP is based on a body part in most languages, and in particular on the word for 'head'. Further body part terms that serve as sources of local expressions belonging here are 'face', 'shoulder', 'hair', 'forehead', and 'back'.

With respect to 'back', we have to mention that the spatial expressions of languages may not only follow the anthropomorphic model but also the

[6] Spatial orientation can be subdivided into absolute (cardinal) and relative (deictic) orientation. For the former, the position of the observer is irrelevant (e.g., orientation in terms of cardinal directions), whereas in the relative framework, orientation is always with respect to something. The base of comparison is usually the speaker. Spatial grammatical morphemes based on body part terms, understandably, mostly belong to the realm of deictic orientation.

[7] The main reference areas differ between Heine's and Svorou's studies: Heine fails to mention the region BESIDE, whereas Svorou further adds BETWEEN, AT THE EDGE OF, TOWARD, THROUGH, etc. The six categories investigated in the present paper are the most general relative areas based on a canonical view of the human body.

zoomorphic one (cf. section **2**). On the basis of an animal body, 'back' is UP, 'head' is in FRONT, and 'tail' or 'rump' is at the BACK. The investigations have not revealed a single language whose spatial expressions are exclusively based on the zoomorphic model, the anthropomorphic model being more general in all cases. Zoomorphic terms are secondary also in the sense that while they presuppose the existence of anthropomorphic ones, the converse does not hold. Spatial terms of the zoomorphic kind typically evolve from body part names that are only used for animal bodies (like 'tail')[8] (Svorou 1993, 75).

DOWN: According to Heine, it is only in the case of the DOWN area that body parts are in a minority as conceptual sources. In this area, the sources are mainly connected to what is called the landmark model, characteristically having a basic meaning like 'land' or 'earth'. In terms of Svorou's data, on the other hand, this area also follows the body part pattern in the first place. Sources of a body part origin include 'bottom', 'rump', 'foot', and 'hip'.

FRONT: For this meaning, it is basically 'face' and 'eye' that are attested, but 'breast', 'forehead', 'mouth', 'head', and 'belly' also occur as sources.

BACK: Here the use of the body part term 'back' is practically universal (in the languages of Oceania, it represents 95%), but—presumably using the zoomorphic pattern—'bottom', 'rump', 'groin', and 'anus' also occur.

BESIDE: The body part sources of the spatial morphemes belonging here are 'side', 'rib', 'belly', 'heart', and 'ear'.

IN: The body part names meaning 'belly', 'palm', 'tooth', 'heart', 'liver', 'bowels', 'mouth', 'neck', and 'blood' serve as conceptual sources here.

[8] On the basis of the foregoing, it can be stated that the HUMAN – ANIMAL distinction among body part terms may be implemented in three different ways: (1) "parallel" body parts have different names (e.g., Hungarian *kéz* 'hand' vs. *mancs* 'paw', *arc* 'face' vs. *pofa* 'muzzle'; (2) a body part name only applies to people or only to animals (e.g., Hungarian *váll* 'shoulder', *hónalj* 'armpit' vs. *farok* 'tail', *szarv* 'horn'); (3) the grammaticalization of the same body part term results in different concepts (e.g., 'back' > BACK vs. UP).

In the Appendix, the entries of *World Lexicon of Grammaticalization* (Heine–Kuteva 2002) that show grammaticalization of body part terms are listed, as well as the ones discussing the lexical sources of the main spatial positions. The above are in agreement with what is included in that lexicon although the latter includes some novel elements, too.

4. Spatial morphemes based on body part terms in Mansi

In what follows, the results of typological studies will be compared to the data of the Mansi language.

In Mansi, the body part terms listed here have developed into adverbs and postpositions of local relations:[9] *puŋk* 'head', *sis* 'back', *sim* 'heart'.[10]

N *puŋk* ~ *poŋk*, LM LU *pøŋk* ~ *päŋk*, P *pøŋk*, K *päŋk*, T *pøŋ* 'head' serve to refer to the concept UP, and with case suffixes added they can also signal the usual "three-directional" pattern ('to'/'at'/'from'). Their postpositional use for denoting local relations is attested primarily in folklore texts, it is not characteristic of newer Mansi texts. Cf.:

(1) (a) LM *wåŋkhä päŋknė* 'to above the pit' [pit-head-lat.]
(Munkácsi–Kálmán 1986, 481)

(b) T *vøŋøl-pøŋt tōjt pätím ål* 'on top of the log there is snow' [log-head-loc.]
(Munkácsi 1892–1921, IV.402)

(c) T *tā̄rėm-pøŋnėl* 'from the sky' [sky-head-abl.]
(Munkácsi 1892–1921, IV.401)

The body part name that has grammaticalized to the largest extent and is also used as a preverb is N *sis*, LM T *šiš*, LU P *šiš* ~ *šįš*, K *sės* 'back', cf.:

(2) (a) LU *kwäl šišne minėn!* 'Go behind the house!' [house-back-lat.]
(Munkácsi–Kálmán 1986, 552)

(b) N *ańt-ńālėm sisiŋ kwol sisėmnėl ti vislem* 'I have produced my arrow made of horn from behind my house' [house-back-PxSg1-abl.]
(Munkácsi 1892–1921, II.178)

[9] Mansi case suffixes do not include any with a demonstrably body part origin. Adverbs and postpositions going back to body part names invariably contain a local case marker; telling them apart from "simple" case-marked nominals may be problematic in some cases, cf. section 8.

[10] Abbreviations: N = Northern dialect, LM = Middle-Lozva dialect, LU = Lower-Lozva dialect, P = Pelym dialect, K = Kondinsky dialect, T = Tavda dialect, PU = Proto-Uralic, PFU = Proto-Finno-Ugric.

(c) N *akw-mat-ērt sisät χåtpä lāyi* 'somebody suddenly started to speak behind him' [back-PxSg3-loc.]

The word occurs as a local expression both in folklore texts and in more recent field notes; it is one of the most general signals of the reference area BACK along with *juji-pālt*. Similarly to other place adverbials, it may cooccur with the word *pāl* 'side, region, half': *sis-pāl* 'behind', *sis-pālnəl* 'from behind' (cf.: *num-pālt* 'above', *joli-pālt* 'below', *ēli-pālt* 'before', etc.), and it can also occur as a preverb: *сысы минантанкве* 'уезжать', *сысы минункве* 'уехать, уйти', *сысы тотыглалункве* 'уносить' (Rombandeeva–Kuzakova 1982, 115). In its role as a preverb, abandoning its original local meaning, it may also fulfil a perfectivising function.

The body part term to signal the area IN is N *sim*, LM LU P *šim*, K *sėm*, T *šåm* ~ *šøm*, meaning 'heart, inner part, central part' (in some dialects, also 'stomach'). Cf.:

(3) (a) N *māχmanä ās-simtė nalėm χūl'tχinte'it* 'his people swing down there in the middle of the river Ob' [Ob-heart-loc.] (Munkácsi 1892–1921, II.213)

(b) N *luwėŋ kārtä simänėl* 'from the middle of his yard with horses' [yard-PxSg3-heart-PxSg3-abl.] (Munkácsi 1892–1921, II.325)

The locative use of *sim* mainly occurs in folklore texts; in colloquial Mansi, a more general term for this area, also of a nominal origin, is the postposition *kiwer* (< 'internal part, the inside of sg').

Comparing the Mansi data with the typological claims reviewed above, we can see that, with respect to the range of body part terms used as conceptual sources, Mansi does not depart from the patterns that are usual in other languages: 'head' and 'back' are the most widespread there, too, for UP and BACK; 'heart' also occurs in other languages as a possible name for IN.

5. The origin of spatial morphemes in Mansi

In order to get the full picture of the spatial system of Mansi (remaining in the framework studied so far), let us review the most general or primary terms (i.e., the most frequent ones, occurring outside folklore texts, exhibiting the three-directional system, and occurring both as adverbs and as postpositions) for the six spatial positions. In the list, only

northern dialects are included with their etymologies as in the *Uralisches Etymologisches Wörterbuch*:

(4) UP: *num-* < **nu-mɜ* 'das Obere, Himmel; Gott' PU (Rédei 1986–1988, 308)
DOWN: *jol-* < **ala* 'Raum, unter etw., Unter-, das Untere-' PU (*ibid.*, 6)
FRONT: *ēl-* < **eδe* 'das Vordere, Raum vor etw., Vorder' PFU (*ibid.*, 71)
BACK: *sis-* < **čänčä* 'Rücken' PFU (*ibid.*, 56)
juji (ju-) 'back part, at back (inside)' < ?
BESIDE: *pōχ-* 'side, at the side' < ?
IN: *kiwər* < **kirkɜ* 'Inneres, Höhlung' PFU (*ibid.*, 161)
sim < *śiδä(-mɜ) (śüδä(-mɜ))* 'Herz' PU (*ibid.*, 477)
(cf. also: *juji, ju-*)

The stems serving to refer to the six basic areas of deictic orientation in Mansi are drastically shortened function words of an ancient origin, and the conceptual sources cannot as a rule be captured in the synchronic system of the language. The etymology of these words reveals, in many cases, a rather general basic meaning of the type 'the front, lower part, inside, etc. of something'. Exceptions are the body part origins of *sis* for BACK (< 'back') and *sim* for IN (< 'heart'). On the basis of the ancient meanings assumed for UP, we could perhaps suspect the presence of the landmark model. For the rest of the areas, the conceptual sources belong to the second most frequent category of Svorou's system, relational parts of objects. The connection between relational concepts and spatial morphemes can be spotted not only by historical analysis but also within the synchronic system, cf. *kiwər* 'the inside of sg' : *kiwərn* 'into' – *kiwərt* 'in' – *kiwərnəl* 'from (inside)', *pōχ* 'side' : *pōχan* 'beside' – *pōχəl, pōχanəl* 'from beside, from the side of', *os* 'surface, face' : T *åšən* 'onto' – *åšnəl* 'off' – *åšt* 'on (top of)'.

Svorou (1993, 84–5) claims that these nouns also used to be body part terms (or names of spatial positions), and their turning into relational part names in fact represents the first step of their grammaticalization. This assumption is definitely supported by the general tendency of semantic change concrete > abstract, as well as the fact that, in a number of languages, lexemes of this type are often polysemous with some body part term, cf. Mansi *pōχ* 'side in general; side of the (human) body', *os* 'surface; face'. Heine (1997, 39–40) claims that such relational terms simply cannot be told apart from spatial terms; their differences are morphosyntactic at best. Whereas the latter belong to the group of adverbs

or adpositions, the former are nouns. They cannot be seen as prototypical nouns, however; they often lack features like number or definiteness.

6. Proto-Uralic antecedents

A hypothetical proto-language system exhibits similar phenomena:[11] the source of spatial position markers basically comes from the group of relational concepts that is claimed by Svorou to be close in frequency (as a source domain) to body part terms (Svorou 1993, 83–5).

(5) UP: **wilä* 'Oberfläche, ober-, das Obere' PFU, ?PU (Rédei 1986–1988, 573)
DOWN: **ala* 'Raum unter etw., Unter-, das Untere' PU (*ibid.*, 6)
FRONT: **eδe* 'das Vordere, Raum vorder etw., Vorder' PFU (*ibid.*, 71)
BACK: **taka* 'Hinterraum, das Hintere' PU (*ibid.*, 506)
IN: **śićä* ~ *śińćä* 'Inneres' PU (*ibid.*, 480)

If we accept Svorou's and Heine's opinion with respect to the origin of relational part names, we can add another point to the semantic reconstruction of the above etymologies. The assumed basic meanings of the spatial morphemes reconstructed for Proto-Uralic may reflect a kind of grammaticalized stage already, and these words may have originally referred to body parts or elements of human environment, as the results of typological studies suggest. A detailed study of the etymons and of the semantic changes observed in the individual daughter languages may make it possible to draw more concrete conclusions with respect the proto-language meaning of the individual etymologies.

7. Further issues

Finally, let me try to answer the question of whether it is possible to unambiguously determine the range of body part terms that may be

[11] Several considerations support our choice of the above etymons from among those reconstructed with a spatial role in Rédei (1986–1988): on the one hand, in several languages of the family, the basic spatial terms are continuations of just these etymons, and on the other hand, these words constitute a rather homogeneous system with respect to their proto-meanings reconstructed on the basis of their role in the daughter languages (cf. also Ojutkangas 2001, 29).

grammaticalized into spatial markers. This question may be formulated in a more general manner: will our increasingly detailed knowledge of grammaticalization processes eventually allow us to detect and determine the non-grammatical source of each and every grammatical category? Can the source–target relationship be seen as universal (cf. Heine et al. 1991, 155)?

In the case of the lexical group discussed in this paper, the issue of which parts of the human body may represent a base of comparison for spatial orientation mostly logically follows from the structure and natural position of the body. That is why we observe that in many languages the same body part terms participate in grammaticalization processes resulting in space marking linguistic elements. However, individual languages may exhibit departures from the general tendencies, and we have to contradict Heine's following statement (formulated as a question): "What induces people worldwide to decide that a body-part like face, rather than navel or kneecap, provides the favorite model for developing expressions for the spatial concept 'front'? And why not the body-part nose? Why, in fact, is the nose notoriously ignored as a source for spatial orientation?" (Heine 1997, 47).

The Uralic languages partly disprove the examples mentioned by Heine. In Finnish, the noun for 'nose' has adverbialized to mean 'opposite' (*nenäkkäin* < *nenä*, cf. section **3**), and it is characteristic of Finnish in general that a considerable percentage of body part names also occur as spatial markers (Jaakola 1997; Suoniemi-Taipale 1996). In Mansi folk songs, the body part name meaning 'knee' can also fulfil a spatial function, cf. N *am sānsėmnė jūw tūläln, am pāltėmnė tī̆' tūläln!* 'bring him home to my knee, bring him to me' [knee-PxSg1-lat.] (Munkácsi 1892–1921, IV.7). However, these examples raise another problem: it is not easy to define the concept of grammaticalized body part name unambiguously. Occasional uses of body part terms in referring to spatial positions abound in languages, cf. Hungarian *itt lohol a sarkamban/nyakamban* 'he is close on my heels/breathing down my neck'; *olyan közel hajol, hogy szinte az ember szájában van* 'he leans as close as almost into one's mouth'; *a város szívében* 'in the heart of town'; *a hegy gyomrában* 'in the belly of the mountain', etc. In these examples, local relations are involved (behind, before, in something), yet the body part names involved cannot be taken to be place adverbs or postpositions; their spatial uses are rather bound, idiomatic. A criterion of grammaticalization could therefore be the lack of lexical boundness, a feature that goes together with an

increase of the productivity of the given linguistic item. Further criteria can be borrowed from the general literature on grammaticalization: the process is characterised by a weakening and abstraction of the semantic content of the lexeme concerned. In the case of Finno-Ugric languages, another criterion may be participation in the three-directional system (cf. Hungarian *szemben – szembe – szemből* 'opposite [at/to/from] < *szem* 'eye', Finnish *päällä – päälle – päältä* 'above [at/to/from]' < *pää* 'head'). Reconsidering the Hungarian examples listed above, we find that the case suffix use of such body part terms used for spatial position marking is also rather bound; they sound a lot less natural with case suffixes referring to other directions: (?)*Ne gyere a sarkamba!* 'Don't come into my heels [too close to me]'; (?)*Gyere ki a sarkamból!* 'Come out of my heels [follow me less closely]'. Another criterion suggesting a higher degree of grammaticalization is where a body part term may express more abstract relations than local ones since more abstract roles (like temporal or causal relations) have to be preceded by more concrete (local) roles, cf. Hungarian *a házzal szemben* 'opposite the house' – *ezzel az érvvel szemben* 'against/as opposed to this argument', also Finnish *päästä* 'after' < *pää* 'head', Estonian *käsil* 'during' < *käsi* 'hand', etc.

However, it is impossible to formulate a thumb rule to tell us which body part names can be seen as "grammaticalized already", and it is likewise impossible to predict exactly which body part names will be grammaticalized in any particular language.

Appendix

Source		Target	Target		Source
back	>	(1) after	before	<	(1) eye
		(2) behind			(2) first (temp)
		(3) cause			(3) front
		(4) earlier	behind	<	(1) back
		(5) then			(2) buttocks
		(6) up (spatial)			(3) follow
belly	>	(1) in (spatial)			(4) footprint
		(2) in (temp.)			

Source		Target	Target		Source
body	>	(1) intensive refl.	down	<	(1) bottom
		(2) middle			(2) buttocks
		(3) reciprocal			(3) descend
		(4) reflexive			(4) earth
bottom	>	down (spatial)			(5) fall
bowels	>	in (spatial)			(6) foot
breast	>	front	front	<	(1) breast
buttocks	>	(1) behind			(2) eye
		(2) down			(3) face
ear	>	locative			(4) forehead
eye	>	(1) before			(5) head
		(2) front			(6) mouth
face	>	(1) front	in (spatial)	<	(1) belly
		(2) up			(2) bowels
flank	>	side (spatial)			(3) center
foot	>	down			(4) heart
forehead	>	front			(5) interior
hand	>	(1) agent	locative	<	(1) area
		(2) five			(2) ear
		(3) locative			(3) edge
		(4) possessive			(4) hand
head	>	(1) front			(5) home
		(2) intensive-refl.			(6) house
		(3) middle			(7) lip
		(4) reflexive			(8) liver
		(5) up			(9) locative copula
heart	>	in (spatial)			(10) neck
lip	>	locative			(11) place
liver	>	locative			(12) side
mouth	>	front	middle	<	(1) body
neck	>	locative			(2) head
shoulder	>	up			(3) reflexive
			side (spatial)	<	flank
			up	<	(1) back
					(2) face
					(3) head
					(4) shoulder
					(5) sky

(Heine–Kuteva 2002)

References

Benkő, Loránd 1967–1976. A magyar nyelv történeti-etimológiai szótára [A historical-etymological dictionary of the Hungarian language]. Akadémiai Kiadó, Budapest.

Heine, Bernd 1989. Adpositions in African languages. In: Linguistique Africain 2: 77–127.

Heine, Bernd 1997. Cognitive foundations of grammar. Oxford University Press, Oxford.

Heine, Bernd 1999. Polysemy involving reflexive and reciprocal markers in African languages. In: Zygmunt Frayzyngier – Traci S. Curl (eds): Reciprocals: forms and functions, 1–29. John Benjamins, Amsterdam & Philadelphia.

Heine, Bernd – Ulrike Claudi – Friederike Hünnemeyer 1991. From cognition to grammar. Evidence from African languages. In: Elizabeth Traugott – Bernd Heine (eds): Approaches to grammaticalization, 149–89. John Benjamins, Amsterdam & Philadelphia.

Heine, Bernd – Tania Kuteva (eds) 2002. World lexicon of grammaticalization. Cambridge University Press, Cambridge.

Jaakola, Minna 1997. Genetiivin kanssa esiintyvien adpositioiden kieliopillistumisesta [On the grammaticalization of adpositions governing the genitive]. In: Tapani Lehtinen – Lea Laitinen (eds): Kieliopillistuminen. Tapaustutkimuksia suomesta [Grammaticalization. Case studies on Finnish]. Kieli 12, 121–56. Helsingin yliopiston suomen kielen laitos, Helsinki.

Jackendoff, Ray – Barbara Landau 1992. Spatial language and spatial cognition. In: Ray Jackendoff (ed.): Languages of the mind: Essays on mental representation, 99–125. MIT Press, Cambridge MA.

Munkácsi, Bernát 1892–1921. Vogul népköltési gyűjtemény I–IV [A collection of Mansi folk poetry 1–4]. Magyar Tudományos Akadémia, Budapest.

Munkácsi, Bernát – Béla Kálmán 1986. Wogulisches Wörterbuch. Akadémiai Kiadó, Budapest.

Ojutkangas, Krista 2001. Ruumiinosannimien kieliopillistuminen suomesssa ja virossa [The grammaticalization of body part terms in Finnish and Estonian]. SKS, Helsinki.

Rédei, Károly (ed.) 1986–1988. Uralisches Etymologisches Wörterbuch. Akadémiai Kiadó & Otto Harrasowitz, Budapest & Wiesbaden.

Rombandeeva, E. I. – E. A. Kuzakova [Ромбандеева, Е. И. – Е. А. Кузакова] 1982. Словарь мансийско-русский и русско-мансийский. Просвещение, Ленинград.

Suoniemi-Taipale, Inga 1996. Ruumis — hahmottamisen lähtökohta. Ruumiinosannimeen perustuvat partikkelit [Body — the centre of perception. Particles based on body part names]. In: CIFU-VIII 5: 198–203.

Svorou, Soteria 1993. The grammar of space (Typological Studies in Language 25). John Benjamins, Amsterdam & Philadelphia.

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BOOK REVIEW

Péter Siptár – Miklós Törkenczy: The phonology of Hungarian. Oxford University Press, Oxford, 2000, 319 pp.

This excellent, rule-based description of Hungarian phonology was published in 2000. It is the only extensive description of Hungarian in English in a modern (post-SPE) framework. *The phonology of Hungarian* (henceforth PH) is divided into three parts: 'Background', 'Systems', and 'Processes'. The 'Background' section contains two chapters. Chapter 1 is an introduction, which outlines the aims, scope, and coverage of the book, a brief overview of previous literature, and a description of the framework and assumptions that the authors adopt. Chapter 2, entitled 'Preliminaries', contains brief descriptions of the Hungarian language in terms of its speakers, classification, and word stock, vowel and consonant inventories and their orthographic representations, dialect variation, stress and intonation, derivation and compounding, verbal and nominal inflection, and word order. The 'Systems' section has three chapters, the first deals with the vowel system, including length alternations and vowel harmony, the second covers the consonant system, including voicing and the status of /x/ and /v/. The third is devoted to the phonotactics of Hungarian. The 'Processes' section is divided into four chapters. The first is devoted to processes involving vowels, particularly vowel harmony and lengthening and shortening processes. The second focuses on processes involving consonants: palatalization, sibilant rules, voicing and devoicing, and processes involving nasals and liquids. The third is devoted to processes conditioned by syllable structure. The fourth covers various surface phenomena including variation in vowel length, compensatory lengthening, hiatus filling, degemination, and cluster simplification.

This book contains a wealth of useful information. The chapter on phonotactics is particularly noteworthy for its extensive coverage. Anyone contemplating working on any area of Hungarian phonology should consult PH, for it contains not only discussions of the previous literature and many examples, it also contains information that is not included in more superficial discussions of the phenomena. For example, in spite of the attention to obstruent voicing and voice assimilation in the recent literature, including that on Hungarian, there are facts about voicing in Hungarian obstruents that have not been treated in the literature. For instance, although Hungarian has obstruents with voicing during closure in word-initial position (including stops that are prevoiced), and clusters of obstruents in word-initial position, there are no voiced obstruent clusters in word-initial position in Hungarian, as S&T point out. In this respect, then, Hungarian is different from Polish and Russian, for example, which also have word initial clusters of obstruents, have prevoiced stops, but do have clusters of voiced obstruents word initially.

The strengths of this book are the clear and comprehensive data presentation and the extensive coverage of the literature. The weakness, if there is one, is in the contribution to linguistic theory. But, since the primary aim of the book is to provide a

1216–8076/$ 20.00

comprehensive and clear description of Hungarian phonology, it cannot be faulted for not having broad-reaching theoretical implications.The analysis is couched (mainly) in Lexical Phonology.

As S&T note, one of the best known phenomena in Hungarian is vowel harmony, and hence readers will be particularly interested in their treatment. Chapter 3 presents a detailed description of vowel harmony, including discussion of neutral (transparent) vowels, disharmonic stems, and stems with vacillating suffixes. Extensive examples of all types of stems are given. S&T's analysis of vowel harmony (Chapter 6) is somewhat difficult to understand because of significant typographical errors, and hence it seems worthwhile to discuss their proposal in some detail. They assume that vowels are specified as follows:

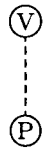
(1)

	COR	LAB	DOR	
$-open_1$	i	ü	u	$-open_2$
		ö	o	**$+open_2$**
$+open_1$	e		a	

The chart given here is corrected. There is an unfortunate typo in this chart in the book (p. 55): the feature [+open$_2$] (bold on chart) is given as [−open$_2$]. (These features are from Clements–Hume (1995): [−open$_2$] equals [+high], [+open$_2$] equals [−high], [−open$_1$] equals [−low] and [+open$_1$] equals [+low]).

In their analysis of vowel harmony, S&T assume that, in general, the place features (COR, LAB, DOR) are assigned to the entire morpheme rather than associated with specific vowels. In the simplest cases, morphemes have a single floating place feature. There is a general rule, *Link Place*, that associates a floating place feature with every vowel that is unspecified for place ((3a), p. 158) and a specific *Link* DOR rule ((3b), p. 159) which applies to floating DOR features.

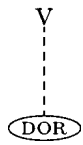
(2) *Link Place*



where V = the VOCALIC node
P = any place feature
encircling: unassociated (placeless V or floating P)
apply maximally (multiple targets may be non-adjacent)

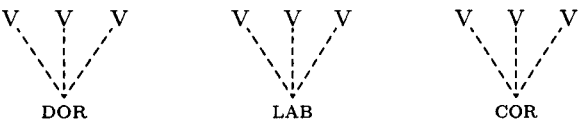
The *Link* DOR rule has a crucial typo in figure (3b) on p. 159: The rule should link any floating DOR feature to any vowel, **whether it is specified for place or not**. Hence, the V should not be encircled as it is in the figure. This typo is extremely unfortunate, since it may render the proposed analysis incomprehensible to the reader. The correct formulation of the rule is given in (3). This linking rule also applies maximally, meaning targets may be non-adjacent.

(3) *Link* DOR



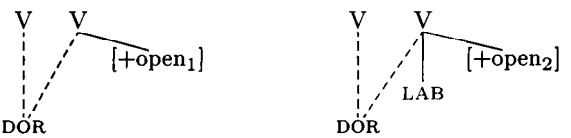
S&T assume that in cases where both link rules are applicable, the more specific rule, *Link* DOR, takes applicational precedence. A stem with only front, round vowels, such as *köszörű* 'grinder', would have, in the underlying representation, only the floating LAB place feature, which would be linked to all vowels by the rule *Link Place* (see (4) below). Much is left to the phonetic implementation module (p. 55) which interprets the first two vowels, which are [LAB, +open$_2$] on the surface, as a mid **front** rounded [ö] and the last, which is specified as [LAB, −open$_2$], as a high, **front**, round vowel, [ü:]. In contrast, a stem with only back vowels, such as *koszorú* 'wreath', would only have a floating DOR feature. Here, both *Link Place* and *Link* DOR could potentially apply, but *Link* DOR would take precedence. The first two vowels would then be specified as [DOR, +open$_2$] after the application of *Link* DOR, and would be phonetically interpreted as mid, back, **round** vowels, [o]. The final vowel would be interpreted as a high, back, **round** vowel, [u:] (see (4) below). The basic idea of the analysis is that morpheme-size floating place features determine the harmony type for the whole word, including suffixes. A stem with a floating DOR will always govern back harmony. A stem with a floating COR (which will only contain neutral vowels, e.g., *rekettye* 'gorse') will always govern front harmony, and a stem with a floating LAB feature will always govern front harmony, too:

(4) (a) koszorú (b) köszörű (c) rekettye



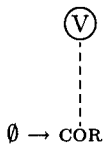
Link DOR applies in the derivation of *ház-nak* 'for (the) house' and *ház-tól* 'from (the) house' as follows.

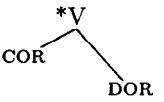
(5) (a) ház-nak (b) ház-tól

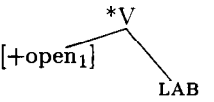


In addition to the two linking rules, S&T assume a rule that specifies vowels that have no place specification as COR, *Default* COR, and two constraints. One constraint prevents vowels from being specified as both COR and DOR (i.e., it prevents vowels being specified as both front and back) and one prevents vowels from being specified as both [+open$_1$] and LAB, since there are no low, front, round vowels in Hungarian. The default COR rule is reproduced in (6), and the constraints in (7):

(6) *Default* COR

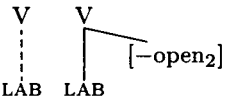


(7) (a) 

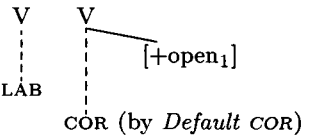
(b) 

In the case of a stem with a floating LAB feature, such as *tűz* 'fire', the rules and constraints apply as in (8):

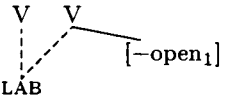
(8) (a) tüz-ünk 'our fire'



(b) tűz-nek 'for (the) fire'



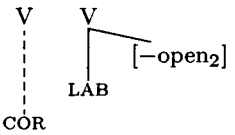
(c) tűz-höz 'to (the) fire'



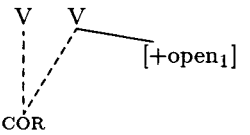
In the case of (8a), the floating LAB associates with the stem vowel by the general *Link Place*. Nothing else happens (the suffix vowel is already specified for place) and the suffix vowel is interpreted as a **front**, round, high vowel. In the case of (8b), again the floating LAB associates with the stem vowel. Although the suffix vowel is not specified for place, the general *Link Place* is blocked by the constraint (7b). The default COR then applies to specify the suffix vowel as COR. In (8c), the floating LAB is associated with both vowels by *Link Place*.

In the case of a floating COR feature, such as in *víz* 'water', the rules and constraints apply as in (9):

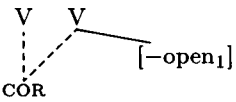
(9) (a) viz-ünk 'our water'



(b) víz-nek 'for (the) water'



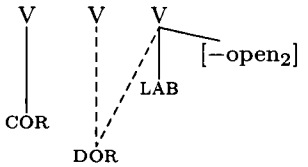
(c) víz-hez 'to (the) water'



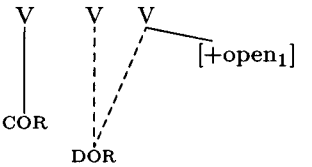
Here in (9a) the floating COR is linked to the stem vowel by *Link Place*. *Link Place* does not apply to the second vowel because it is already specified as LAB. LAB vowels that are not also specified as DOR , automatically are interpreted as **front**. In the case of (9b) and (9c), however, the floating COR is linked to the suffix vowels because they have no place features.

In cases such as *piros* 'red' and *papír* 'paper', these rules and constraints operate as in (10).

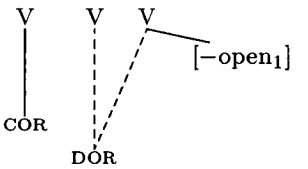
(10) (a) piros-unk 'our red one'



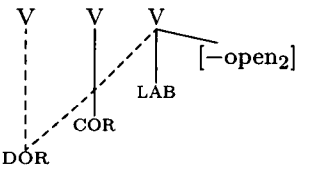
(b) piros-nak 'for (the) red one'



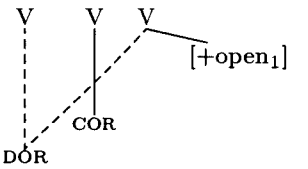
(c) piros-hoz 'to (the) red one'



(d) papír-unk 'our paper'



(e) papír-nak 'for (the) paper'



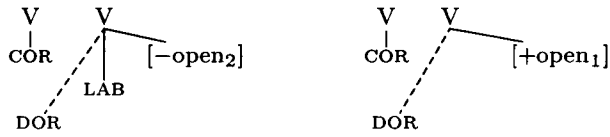
In the case of the stem *piros* the first vowel is linked to COR and there is a floating DOR feature. In (10a) the suffix vowel is specified as LAB. By *Link DOR*, the floating DOR is linked to all vowels except the first, which is blocked by the constraint that prohibits vowels from being linked to both DOR and COR. In the case of (10b), the suffix vowel is specified only as [+open$_1$], and again, by *Link DOR*, the floating DOR is linked to the suffix vowel, but not the preceding stem vowel. In (10c) the floating DOR feature is linked to the suffix vowel which is not specified as LAB, but this vowel is interpreted as round, since all DOR vowels are interpreted as round except those specified as [+open$_1$]. These forms exhibit that in S&T's analysis the back vowels [o] and [u] are sometimes specified as both DOR and LAB (as for example in the suffix vowel in (10a)) and sometimes only as DOR (as, for example, in the suffix vowel in (10c) and the second stem vowel in (10a)). Hence, representationally different vowels are interpreted as phonetically identical. Such representational differences are, of course, necessitated by the analysis: a suffix vowel that is always round must be specified as LAB, whereas a non-low stem vowel that is always back may be just DOR and will be interpreted as round.

In the case of *papír* the stem is specified with a floating DOR feature and the second stem vowel is linked to COR. In (10d) the floating DOR links to the first stem vowel and the suffix vowel by *Link DOR*, which is assumed to apply maximally, i.e., to targets that are not necessarily adjacent. The second COR vowel is skipped because linking the DOR to this vowel would violate the constraint against DOR/COR vowels. In (10e)

the DOR feature is linked, again by *Link DOR*, to the suffix vowel which is specified as [+open$_1$]. (There is an error in the diagram representing the derivation of (10e) *papír-nak* ((21c) in the book on p. 168), which has been corrected here.)

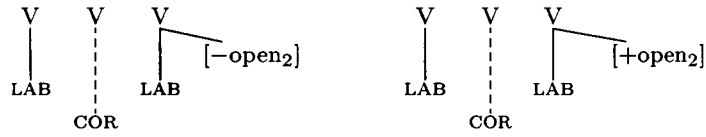
Stems like *híd* 'bridge', which S&T call antiharmonic, and which exceptionally govern back harmony, have the stem vowel linked to a COR feature and also have a floating DOR feature. The DOR cannot link to the stem vowel (because of the constraint against vowels specified as both DOR and COR), but by *Link DOR* it is linked to suffix vowels as illustrated in (11):

(11) (a) hid-unk 'our bridge' (b) híd-nak 'for (the) bridge'

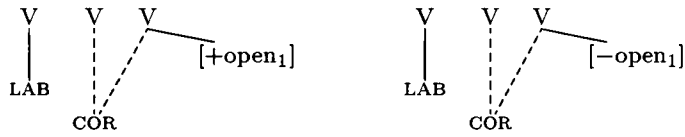


In the case of a form like *öreg* 'old', S&T assume that both the stem vowels are linked to place features, the first to LAB and the second to COR. It appears, however, that the same results obtain if the COR is floating as illustrated in (12).

(12) (a) öreg-ünk 'our old one' (b) öreg-től 'from (the) old one'



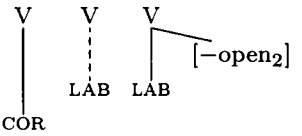
(c) öreg-nek 'for (the) old one' (d) öreg-hez 'to (the) old one'



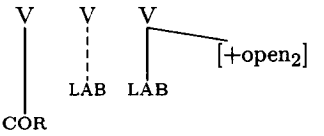
In the case of (12a) and (12b), the floating COR would be linked, by *Link Place*, to the second stem vowel. It could not link to the suffix vowels in either form because that vowel is already specified for place. In (12c) and (12d), however, the floating COR would link to both the second root vowel and the suffix vowels.

In the case of a stem like *szemölcs* 'wart', there is a mismatch between the text and the diagram. The intent in the text is clearly that the LAB feature be associated with the suffix vowel to give *szemölcs-höz* 'to (the) wart', but the LAB is not associated in the diagram in (19d) in the book (p. 167). If forms with front unrounded vowels which precede front rounded vowels (such as *szemölcs*) are assumed to have COR linked to the first vowel and a floating LAB feature, then the correct forms will be derived. This is illustrated in (13):

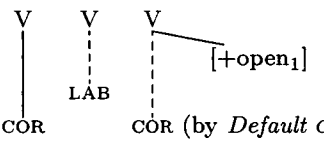
(13) (a) szemölcs-ünk 'our wart'



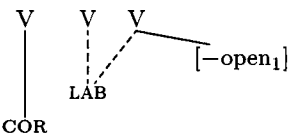
(b) szemölcs-től 'from (the) wart'



(c) szemölcs-nek 'for (the) wart'

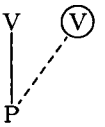


(d) szemölcs-höz 'to (the) wart'



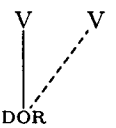
In addition to the two linking rules, the two constraints, and the default COR rule, S&T assume two spreading rules, *Spread Place* and *Spread DOR*. The spreading rules are given in (14).

(14) (a) *Spread Place*



apply locally (targets adjacent)
iterative left-to-right

(b) *Spread DOR*

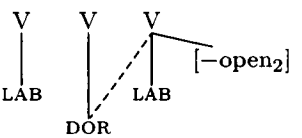


apply locally (targets adjacent)
iterative left-to-right

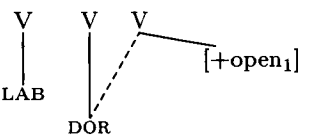
The *Spread Place* rule applies to spread a **linked** place feature to any adjacent vowel that is not already specified for place. The *Spread DOR* rule spreads any linked DOR feature to an adjacent vowel, whether that vowel is specified for place or not. As with the *Link* rules, the more specific *Spread DOR* takes applicational precedence if both are applicable.

These rules are involved in the derivations with exceptional stems such as *nüansz* 'nuance', which have both front and back harmonic vowels.

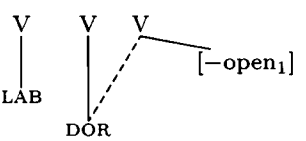
(15) (a) nüansz-unk 'our nuance'



(b) nüansz-nak 'for (the) nuance'



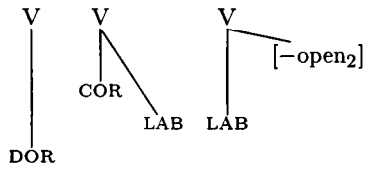
(c) nüansz-hoz 'to (the) nuance'



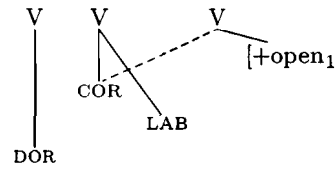
In the case of (15a), both the *Spread Place* and the *Spread* DOR rules are applicable, but the specific *Spread* DOR applies to link the DOR feature to the suffix vowel. In (15b) again the *Spread* DOR applies to spread the DOR feature to the suffix vowel that is unspecified for place. In (15c), again the DOR feature is spread to the adjacent suffix vowel by *Spread* DOR.

In a form such as *sofőr* 'driver', the first vowel is linked to the feature DOR, and the second vowel underlyingly linked to **both** LAB and COR. This dual specification is necessary to block the DOR feature from incorrectly spreading to it. As illustrated in (16a), nothing happens when a suffix vowel linked to LAB follows this stem.

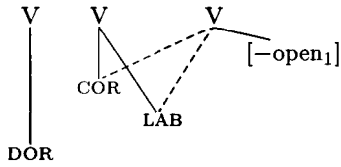
(16) (a) sofőr-ünk 'our driver'



(b) sofőr-nek 'for (the) driver'



(c) sofőr-höz 'to (the) driver'



In (16b), the COR specification spreads, by *Spread Place*, to the suffix vowel. LAB cannot spread because it is blocked by the constraint against LAB [+open$_1$] vowels. In (16c) both COR and LAB spread to the suffix vowel by *Spread Place*.

In this discussion, we have seen how the analysis proposed by S&T works, something that is made quite difficult by several serious typographical errors in the book under review. What is particularly interesting is that the *Spread* rules turn out to be necessary only to account for exceptional forms. As illustrated above, all the regular cases (and even one exceptional case, the *híd* 'bridge' type) are accounted for with the two general *Link* rules and the *Default* COR rule, and two constraints that are necessary in any analysis. Hence, the analysis proposed by Siptár and Törkenczy is actually much simpler than it might appear at first glance.

Catherine O. Ringen

Reference

Clements, George N. – Elizabeth Hume 1995. The internal organization of speech sounds. In: John A. Goldsmith (ed.): The handbook of phonological theory, 245–306. Blackwell, Cambridge MA & Oxford.

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HUNGARIAN BOOKS ON LINGUISTICS

Katalin É. Kiss: Anyanyelvünk állapotáról [On the condition of our mother tongue]. Osiris Kiadó, Budapest, 2004. 190 pp.

Many Hungarians, including the majority of the cultural elite, share the feeling that the Hungarian language is in danger; it keeps deteriorating. What is more, the Hungarian population—finding themselves in five countries after the Versailles Treaties in 1920, and in eight countries after the breaking up of Czechoslovakia, the Soviet Union, and Yugoslavia—also share the conviction that the Hungarian nation is at present primarily a linguistic entity with a common cultural and historical heritage, hence the deterioration of the Hungarian language endangers the survival of the nation itself. The anguish of Hungarians that they cannot preserve the sophistication, the flexibility and the beauty of their language sustains in the media a particular genre aimed at 'language cultivation', pointing out various symptoms of the corruption and abuse of the language, and giving advice on how to speak and write correctly.

É. Kiss's book is a linguist's answer to the worries of laymen. The first major chapter of the book addresses the question "Is the Hungarian language deteriorating?" The author argues that the worries of Hungarian speakers are unfounded; what seem to be symptoms of deterioration are merely symptoms of the slow change that is an inherent property of every living language. She examines the major phonological, morphological and syntactic phenomena which seem to be changing; which display conservative and novel variants. Although the new forms necessarily violate the norm prevailing among educated Hungarians, they are claimed to be neither grammatically incorrect, nor functionally inadequate or impoverished; they are shown to be derived by the regular rules of grammar, and to be able to fulfil the same range of functions that their standard counterparts can. They simply represent variants which only exist in certain—regional or sociological—dialects of the language. The author points out about a large number of the allegedly new, corrupted forms that they have been present in the language for centuries; in some cases, since the very first written documents in the 12th–13th century; the only problem with them is that they had not been part of the dialect that formed the basis of literary Hungarian. The author concludes that fighting against the slow changing of the language is both unnecessary and useless. What 'language cultivation' can do is make speakers aware of the different sociological and stylistic values of the coexisting versions.

The corruption is also believed to have affected the lexicon; it is allegedly manifested in the language borrowing English words by the thousand, instead of creating new words from Hungarian stems. The author proves that this is a myth, too. She examines the vocabularies of three dictionaries collecting the new words of the past twenty years, and she finds that the proportion of loan-words among the 5600 new words compiled is less than 20%.

One third of the Hungarian population are minorities in neighbouring countries. They are (Hungarian–Romanian, Hungarian–Slovak etc.) bilinguals, and their second language affects their use of Hungarian. The contact variants of Hungarian differ

from the standard language in minor respects (mainly in their lexicon; much less in their grammar), and the contact phenomena are claimed to be natural, unavoidable consequences of bilingualism, rather than symptoms of language corruption.

In sum, the author's answer to the question asked in the title of the first chapter (Is the Hungarian language deteriorating?) is "no, not at all".

The question asked in the second half of the book, "Will the Hungarian language survive?", is not answered so unequivocally. A language remains intact only if a community uses it as their primary means of communication in every sphere of their private and social life. If the types of situations in which a language can be used are constrained, if the use of a language is restricted to private life, it begins deteriorating, and eventually dies. The author demonstrates — by quoting statistical data and the results of large-scale sociolinguistic research carried out among minority Hungarians — that the use of Hungarian is so much constrained in the neighbouring countries that more and more Hungarians find it neither possible nor worthwhile to acquire, to preserve, and to pass on the language of their ancestors. She summarizes what sociolinguistics has revealed about the motivation, the stages, and the means of language loss/language change, and she describes how this process has turned into an accelerating spiral among minority Hungarians.

A section of the book deals with linguistic rights; to what extent law can provide help against forced assimilation. Finally, the question is considered whether the processes that have led to Hungarian losing ground with respect to the state languages in the neighbouring countries can also take place in the European Union. If, as a consequence of globalization and European integration, Hungarian is replaced by English in various segments of public life, in the long run we can reckon with the same consequences that minority Hungarians have experienced.

László Varga: Metrikus fonológia és a ritmikai hangsúlyváltozás [Metrical phonology and rhythmical stress alternation]. Tinta Könyvkiadó, Budapest, 2005. 135 pp.

This book discusses rhythmical stress alternation in English and Hungarian, and, through this discussion, it offers a thorough introduction to metrical phonology.

It is a well-known fact that most English words and phrases that are double-accented in isolation (e.g., *thirteen* or *five o'clock*) may change their stress pattern under embedding: they may lose their first or their second accent, depending on whether they are preceded or followed by another accent in the matrix phrase. These changes are the two subtypes of rhythmical stress alternation. It is less well-known that, *mutatis mutandis*, similar changes have been observed in a variety of other languages (German, Dutch, Polish, Hebrew) and that, to a limited degree, they also occur in Hungarian. Since rhythmical stress alternation raises important theoretical questions, its examination has always been one of the main areas of metrical phonological research (the other main area being the stressing of individual words), and has remained an important issue until today.

The first, bigger, part of the book presents the most influential works that have appeared in English in connection with rhythmical stress alternation, and it is the first detailed critical survey of this area of metrical phonology written in the Hungarian language. The second part of the book explores the Hungarian counterparts of rhythmical stress alternation and, after confronting them with the metrical phonological theories presented in the first part, it offers an original explanation of them.

Contents: 1. Introduction; 2. Linear and non-linear phonologies; 3. The beginnings of metrical phonology (Liberman and Prince's tree-and-grid based model); 4. Hayes' theory of metrical adjunction (the rule of Rhythmical Adjustment and its extension by Kager and Visch); 5. Selkirk's grid-based model; 6. Halle and Vergnaud's grid-based model; 7. Gussenhoven's accent-based model; 8. The facts of Hungarian rhythmical stress alternation; 9. Approaches to Hungarian rhythmical stress alternation (adaptations of Selkirk's, Hayes', Gussenhoven's models); 10. The 'split analysis' of Hungarian rhythmical stress alternation (Hayes' precompilation rules, Kaisse's P1 rules, Varga's proposal of splitting Hungarian rhythmical stress alternation into a precompiled and a P1 component); 11. Short summary. The book is closed by a subject index.

Nóra Wenszky: Secondary stress in English Words. Akadémiai Kiadó, Budapest, 2004. 248 pp.

This study examines what regulates secondary stress placement in English words. After discussing and criticising some influential stress theories, the author proposes a modification of the framework presented in Luigi Burzio's *Principles of English stress* (1994). She then tests the modified framework against a corpus of almost a thousand words with all their variant pronunciations. The discussion is centred around the following problems: (i) factors influencing pretonic secondary stress placement, with special emphasis on prefixes and classical compound-initials; (ii) the stressing of words ending in *-ative*; and (iii) the stressing of words ending in *-atory*. The analyses presented prove that Erik Fudge's classification of prefixes and compound-initials (*English word stress*, 1984) can successfully be incorporated into Burzio's framework: these are assigned pre-determined structures here. The author finds that stress preservation plays a major role in the placement of pre-tonic secondary stresses of affixed items. The hypothesis that initial heavy syllables attract stress is not confirmed. Rather, the author proposes that one heavy syllable may be left unparsed (and thus unstressed) at the beginning of words, though this is rarer than an initial unstressed light syllable. Based on her analysis of *-atory* words, the author furthermore suggests that a new foot type, (HWW), should be included in the inventory of well-formed feet. This foot type is not discussed in Burzio's book but it helps the present author to provide a systematic analysis of words that must be treated as exceptional in the lack of such a foot. At the end of the volume, an extensive list of all analysed items is provided.

Contents: 1. General introduction; Part One: The background; 2. Literature review; Part Two: Pre-tonic secondary stress; 3. Introduction to Part Two; 4. The place of secondary stress; 5. Prefixes and classical compounds; 6. Analysed words; Part Three: Post-tonic secondary stresses; 7. Introduction to Part Three; 8. The background; 9. The ending *-ative*; 10. The ending *-atory*; Part Four: Summary; 11. Conclusions and major findings; Bibliography, Appendices.

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... as described by Schmidt (1967) ...
... as referred to by Hoover (1967, 56–78; 1976, 43).
... mentioned by several authors (Elgar 1978, 77; Williams 1981, 154–6) ...

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Bárczi, Géza 1958a. Magyar hangtörténet [The historical phonology of Hungarian]. Akadémiai Kiadó, Budapest.

Bárczi, Géza 1958b. A szótövek [Word stems]. Akadémiai Kiadó, Budapest.

Brockhaus, Wiebke 1995. Skeletal and suprasegmental structure within Government Phonology. In: Jacques Durand – Francis Katamba (eds): Frontiers in phonology: Atoms, structures, derivations. 180–221. Longman, Harlow.

Cole, Jennifer 1995. The cycle in phonology. In: Goldsmith (1995): 206–44.

Goldsmith, John A. (ed.) 1995. The handbook of phonological theory. Blackwell, Cambridge MA and Oxford.

Kaye, Jonathan – Jean Lowenstamm – Jean-Roger Vergnaud 1990. Constituent structure and government in phonology. In: Phonology 7: 301–30.

Tomioka, Satoshi 1997. Focusing effects and NP-interpretation in VP-ellipsis. Doctoral dissertation, University of Massachusetts, Amherst.

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(1) (a) A sólymaid elszálltak
the falcon-gen-pl-2sg away-flew-3pl
'Your falcons have flown away.'

Examples can be referred to in the text as (1a), (1a–d), etc.

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